DOCUMENT RESUME

ED 108 286 EA 007 199

TITLE South Carolina Middle School Guide.
INSTITUTION South Carolina State Dept. of Education, Columbia. Office of General Education.
PUB DATE 75
NOTE 144p.; Photographs may reproduce poorly

EDRS PRICE MF-$0.76 HC-$6.97 PLUS POSTAGE
DESCRIPTORS Academic Achievement; Course Content; *Curriculum; Educational Administration; Educational Objectives; Guidance Counseling; *Guides; *Middle Schools; Performance Criteria; Secondary Education; State Departments of Education; *State Standards; Student Evaluation; Teaching Methods

ABSTRACT

Developed to assist all South Carolina school personnel responsible for planning, implementing, or supervising a middle school to achieve goals and objectives compatible with State Board of Education policies and standards, this guide is designed to be adapted to local needs. State standards for minimum programs related to middle schools are included for reference in planning. Emphasizing program guidance, statements of philosophical principles to guide administrators, teachers, and counselors precede a delineation of educational objectives, performance criteria, and course content for the typical middle school curriculum. (Author/DW)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED108286

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

SOUTH CAROLINA MIDDLE SCHOOL GUIDE

Prepared by

Office of General Education
Rutledge Building
Columbia, South Carolina

EA 007 199

State Department of Education
Cyril B. Busbee
State Superintendent of Education

1975

FOREWORD

The emergence of the middle school offers exciting potential for the long-felt concern about education of children between ten and fourteen years of age. What type of instructional program will best meet their individual needs?

In this period of history, schools must be in step with social and technological changes. While delay of needed changes penalizes students, traditional practices which have proven effective should not be abandoned merely for the sake of innovation.

The underlying philosophy of the middle school is to capitalize on the unique characteristics of this age group. The foundations of elementary school and the future years of high school are not major concerns, although both must be considered in relationship to this vital intermediate period.

It is hoped that this publication will offer sound suggestions to educational leaders seeking guidance in developing a new middle school program as well as some alternatives for consideration by those who already have middle schools in operation.

Cyril B. Busbee
State Department of Education

". . .Ability to cope with change must be the outcome of today's education."

Kratzner and Mannies

INTRODUCTION

The concept of the middle school, while relatively new, recognizes the need for a less formal, flexible educational experience specifically tailored for older children and early adolescents between the ages of ten and fourteen. The middle school forms a significant span of the transitional bridge from childhood to adolescence – from the elementary grades to high school. It fills a void long recognized by educators as an intermediate period when children's early enthusiasm for school often wanes, when dropouts begin to mount, when the gap widens between "good" and "poor" students.

The leading reason given for dropouts at all school levels is a "dislike of school." The basic philosophy of the middle school is to make learning more attractive by instructional methods and materials which stimulate in students the desire to learn.

Middle schools in South Carolina emerged in 1966 and have rapidly increased each year. With the trend of breaking away intermediate grades from the elementary organization and the removal of the ninth grade from the old, firmly established junior high, the State Board of Education adopted a legal definition of the middle school in 1969. Any school that included grades 5–8, or any combination, could thereafter be classified as a middle school. In 1974, further action was taken by the Board to require that a middle school must contain at least three consecutive grade levels, if it is to be recognized or accredited as a middle school.

The effective student-centered middle school will transfuse new purpose and direction into these crucial intermediate years. It will help parents and other adults understand the characteristics of this perplexing age. It will help these young students better understand themselves, their fellow men, and their environment, and better cope with the dramatic physical, emotional and intellectual changes they undergo during these years.

Because of its elasticity, the middle school affords a natural opportunity to modify learning experiences for the handicapped student as well as the intellectually and artistically talented.

A wide variety of meaningful exploratory learning experiences – building upon the basic skills of the elementary grades and leading naturally to the more specialized secondary school – is one essential ingredient of a successful middle school. Capitalizing on the students' natural energy and curiosity and their search for self-esteem and recognition by others is another. Continuous progress in both the affective and cognitive domains is a crucial element.

Development of effective middle schools in South Carolina could be one of the most exciting educational improvements of the century. It should stretch minds, promote sound physical and emotional health, and whet appetites for life-long learning.

How South Carolina meets the 21st century is up to its youth. How these youth mature in our schools is up to us.

Joseph E. Kimpson
General Supervisor for
Middle Schools

ACKNOWLEDGMENTS

The efforts and cooperation of the many middle school administrative staffs and faculties who assisted in the publication and evaluation of this guide are gratefully acknowledged. Some of those making direct contributions are:

– Mr. James O. Brown, Principal
Corbett Middle School
Aiken

– Miss Betsy Garren, Curriculum Coordinator
Irmo Middle School
Irmo

– Mr. William Gunter, Principal
Northside Middle School
West Columbia

– Mr. Clifton Harkey, Principal
Caughman Road Middle School
Columbia

– Mrs. Ceicle V. Heizer, Middle School Consultant
Greenville County Schools
Greenville

– Mr. John Hicks, Principal
Clover Middle School
Clover

– Mr. T. E. Johnston, Assistant Superintendent
of Instruction
Berkeley County Schools
Moncks Corner

– Mr. Glennie Murray, Director of
Secondary Schools
Charleston County Schools
Charleston

– Dr. Maxie O'Tuel, Principal
E. L. Wright Middle School
Columbia

– Mr. L. J. Van Faussien, Principal
Edisto Middle School
Cordova

– Dr. Harold Vaughn, Assistant Superintendent,
Middle Schools
Richland School District One
Columbia

– Mrs. Ruth Whitney, Teacher
Caughman Road Middle School
Columbia,

The following State Department of Education personnel were either members of the Middle School Curriculum Guide Committee and/or made contributions to the publication:

M. Joel Taylor
Chief Supervisor, School Services Section
Publication Coordinator

Robert S. Black, Director
Office of Programs for the Handicapped

Toni Child, Information Specialist

Virginia Craig, Elementary Guidance Consultant

Pamelia Cromer, Science Consultant

Beverly Enwall, Foreign Language Consultant

Vincent Granell, Health Education Consultant

Mary F. Griffin, Elementary Library Consultant

Thomas A. Hatfield, Art Consultant

Edith W. Jensen, Individually Guided
Education Consultant

Mary Kelly, Reading Consultant

Joseph E. Kimpson, Middle School Supervisor

Charles Kneece, Consultant, View Project

Don Lauder, Music Consultant

Alice Linder, Environmental Education Consultant

A. M. Moseley, Social Studies Consultant

Emily Owens, Chief Supervisor
Vocational Program Planning and Development

Tom Parks, English Consultant

Daniel Sandel, Mathematics Consultant

Harold Schreiner, Physical Education Consultant

J. Ronald West, Elementary Education Supervisor

TABLE OF CONTENTS

Foreword i

Introduction ii

Acknowledgments iv

Table of Contents vii

Standards for Quantity and Quality 1

Standards for Middle Schools 2

Rationale 19

Middle School Student 23

The Teacher 27

Administration 31

Teaching Strategies and Organizational Patterns 35
- Teaching Strategies 35
- Organizational Patterns 39

Guidance and Counseling 43

Pupil Progress Assessment 49

Curriculum 55
- Language Arts 57
- Mathematics 63
- Science 67
- Environmental Education 75
- Social Studies 79
- Health and Safety 82
  - Physical Health 82
  - Mental and Social Health 84
  - Consumer and Environmental Health 86
  - Safe Living 87
- Physical Education 89

Fine Arts 96
Art 97
Music Education 101
Exploratory Programs 106
Industrial Arts 107
Consumer and Homemaking Education 113
Foreign Language 119
Personal Typing 124
Library/Media Center 125
Programs for the Handicapped 127

Bibliography 129

STANDARDS FOR QUANTITY AND QUALITY

The middle school is one strong pattern of school organization that has emerged nationally in the decade between the mid-sixties and the mid-seventies. South Carolina has been more fortunate than some other states in gaining status for middle schools because the State Board of Education, in 1969, took the initiative to define it organizationally. The policy-making board took another giant step in 1974 when its members adopted separate standards as part of the *Defined Minimum Program for South Carolina School Districts.* After a phase-in implementation period during the 1974–75 school year, each school system is required to meet all criteria for evaluation, effective July 1, 1975.

Now that the middle school has been around long enough to be considered as important as any other level on the education ladder, more direction is deemed necessary to ensure strengthening the program.

This publication has been developed to assist all school personnel responsible for planning, implementing or supervising a middle school in achieving goals and objectives that are compatible with policies and standards of the State Board of Education. It is designed to be adopted to *local* needs and missions. The first part of the guide contains the standards for middle schools from the *Defined Minimum Program for South Carolina School Districts.* This will serve the reader as a ready reference when planning programs, for implementation of these standards is the minimum program upon which we must build.

Program guidance is the main thrust in the publication. The ideas presented in this guide have been developed by the staff members of the Department of Education with the able assistance of middle school practitioners throughout the State. Philosophical principles and broadly stated goals and objectives are included. The guide is intended primarily to be utilized by a school, or system, to develop more specific goals and objectives which are focused in a common direction.

No single publication can include all the answers. No other state has developed a similar guide of this scope. It is hoped that this first effort in South Carolina will afford some help in strengthening all existing, and future, middle schools in the State.

Standards for Middle Schools

An Excerpt from the Criteria for Implementing A Defined Minimum Program for South Carolina School Districts

Adopted by

The State Board of Education

March 8, 1974

ORGANIZATION AND ADMINISTRATION

The following classifications are recognized as organizational patterns for South Carolina schools:

Elementary – Grades K–6 or any combination when there is a minimum of three consecutive grade levels.*

Middle – Grades 5–8 or any combination when there is a minimum of three consecutive grade levels.*

Junior High – Grades 7–8, 7–9, or 8–9.

Senior High – Grades 9–12, or 10–12.

Special Schools – Any school organized to serve the particular needs of a common group of students (e.g. schools for the handicapped and vocational schools).

*The effective date for the above classification of schools is July 1, 1978. Any exceptions must receive annual approval and be given a temporary classification by the Director of the Office of General Education.

Organizational Exceptions

Grades K–8 or any combination of these grades may be classified as an elementary school when justified because of Federal mandate or geographic isolation. When such classification is approved, Grades 1–6 will operate according to elementary standards and Grades 7–8 according to middle or junior high school standards. Any conflict between the two sets of standards must be justified in writing and approved by the Chief Supervisor of Elementary or Secondary Education no later than July 1 prior to the beginning of the school year.

MIDDLE SCHOOLS

I. Administration

A. Each school with an enrollment of fewer than 375 pupils shall have a principal who devotes at least half time to administration and supervision.

Effective July 1, 1977, each school with an enrollment of fewer than 250 pupils shall employ a principal who devotes at least half time to administration and supervision.

B. Each school with an enrollment of 375 or more pupils shall have a principal who devotes full time to administration and supervision.

Effective July 1, 1977, each school with an enrollment of 250 or more pupils shall have a full-time principal.

C. Effective July 1, 1977, each school with an enrollment of 600 or more pupils shall have a principal and one full-time assistant principal and shall add an assistant principal for each additional 600 pupils.

D. The contracted annual salary rate of the principal shall be higher than that of any other member of the faculty or staff of his school.

Effective July 1, 1977, the contracted monthly and annual salary rate of the principal shall be higher than that of any other member of the faculty or staff of his school.

II. Secretarial Services

A. Each school with an enrollment of fewer than 375 pupils shall have at least half-time secretarial services.

B. Each school with an enrollment of 375 or more pupils shall have full-time secretarial services.

C. Effective July 1, 1977, each school shall have full-time secretarial services.

III. Library Services

A. Each school with an enrollment of fewer than 400 pupils shall provide the services of a librarian or teacher-librarian for at least 200 minutes daily.

B. Each school with an enrollment of 400 or more pupils shall provide the services of a librarian on a full-time basis.

C. Each school with an enrollment of 750 or more pupils shall employ an additional full-time person in the library. This may be a noncertified person who meets the requirements for library aides. (Effective July 1, 1978)

D. A school library shall be kept open to pupils and teachers a minimum of seven hours per school day. This should include at least 30 minutes prior to the opening of school and 30 minutes after dismissal of school.

IV. Guidance Services

A. Each school having 500 pupils assigned to Grades 5—8 or any combination thereof shall provide one full-time guidance counselor for every 500 pupils.

B. Effective July 1, 1977, schools with fewer than 600 pupils shall provide the services of a guidance counselor in the following ratio:

up to 200	100 minutes per day
201 to 300	150 minutes per day
301 to 400	200 minutes per day
401 to 500	250 minutes per day
501 to 600	300 minutes per day

C. Schools with more than 600 pupils shall provide guidance services at the ratio of 50 minutes per 100 pupils to the extent that the total school enrollment reflects a minimum of 50 minutes of guidance services for each 100 pupils.

D. Schools required to provide 300 or more minutes of guidance services per day must employ a full-time counselor.

V. Teacher Aide

Each teacher of trainable mentally handicapped, orthopedically handicapped, and emotionally handicapped pupils shall have a teacher aide full time.

VI. Teaching Load

A. The membership for each class taught by an individual teacher shall not exceed 35 pupils with the following exceptions:

1. The average membership for physical education classes shall not exceed 40 pupils. If health, physical education, and safety are taught as a combined course, membership shall not exceed 35.

2. The average membership for music laboratory classes shall not exceed 35 pupils. Large group instruction is desirable at times for chorus, orchestra, and/or band groups.

B. The maximum teacher load shall not exceed 150 pupils daily with the following exceptions:

1. Physical education teachers may teach no more than 240 students per day.

2. Music teachers may teach no more than 240 pupils per day.

C. Maximum teacher load requirements and individual class size limits are the same for mini-courses as any other classes.

D. Special Education

1. Maximum class size for self-contained classes.

a. Educable Mentally Handicapped	16–1 based on memberhsip
b. Trainable Mentally Hand capped	12–1 based on membership
c. Emotionally Handicapped	15–1 based on membership

2. Minimum caseload for resource teachers.

The minimum caseload required for resource room and itinerant teacher models for the handicapped is as follows:

Educable Mentally Handicapped	26
Emotionally Handicapped	26
Learning Disabilities	26
Orthopedically Handicapped	16
Hearing Handicapped	12
Visually Handicapped	12

3. If a teacher serves more than one area of handicap, the caseload must equal the minimum requirements for the handicap that represents the majority of the pupils enrolled in the program.

4. A speech clinician shall serve at least 75 speech handicapped pupils during the school year.

VII. Length of School Day

A. The minimum length of the school day to be devoted to planned learning activities for pupils shall be five hours exclusive of lunch period, recess, homeroom, and other nonacademic activities.

B. The school day for full-time teachers shall be a minimum of seven hours.

VIII. Length of School Term

Each school shall operate a minimum of 180 days. No more than six of these days shall be less than the minimum stated in the section, *Length of School Day*. Days of abbreviated schedules must be of at least three hours in length. This standard does not apply to cases where the safety and welfare of the pupils are involved.

IX. Pupil Accounting and Reporting

A. Each school shall maintain adequate records on each child's physical, social, mental, and emotional development.

B. Each school shall have an appropriate means of reporting to parents.

C. Each pupil transferring shall be given a transfer form showing name, date of birth, grade placement, and attendance record to present to the principal of the school where he is enrolling. Additional data shall be furnished by the school on request.

X. Safety and Welfare of Pupils

A. A written plan shall be designed to provide for the protection and welfare of pupils in the event of any disaster which threatens to involve the school community. Example: Tornado, hurricane, fire, etc.

B. Each school shall prohibit competitive sports of a varsity pattern for Grades 5–6.

C. Each school shall conduct a fire drill at least once a month and shall have a plan for vacating the building with well-defined exit routes.

D. Each school shall have adequate first aid supplies and equipment.

XI. Materials of Instruction

A. Each school shall have budgeted and expended annually through the regular business office of the school a minimum of $7 per pupil for instructional supplies and materials, library books, supplementary reading materials, and other instructional media such as filmstrips, mounted pictures, pamphlets, brochures, 8mm and 16mm teaching films, transparencies, tapes, recordings, slides.

B. Each library shall have a collection of at least eight library volumes per pupil. New schools can meet this standard over a period of three years by providing at least four volumes per pupil the first year and an additional two volumes per pupil in both the second and third years. Local schools are responsible for reviewing and selecting books that are appropriate to the needs of the school from standard lists.

C. Each school shall provide an adequate supply of audiovisual materials and equipment in proportion to the needs of its program.

XII. Inservice Education

Each school shall have a well-organized inservice education program for professional personnel in addition to regularly scheduled routine faculty meetings. The program should be continuous and go beyond the five days of inservice education required to receive State aid salaries for 185 days. Staff members should be involved in the planning and evaluation of these activities which should focus on the problems, needs, purposes, and goals of the educational program.

XIII. Qualifications of School Personnel

A. Principal

1. Each principal shall hold a South Carolina elementary principal's certificate. Exceptions are:

a. Was employed prior to July 1, 1973, and holds a secondary principal's certificate; however, if a vacancy occurs, the position shall be filled with a properly certified elementary principal.

b. Was employed prior to the 1962-63 school year; held a permanent professional certificate on July 1, 1962; has been continuously employed as a principal in the same school system; and earns a minimum of six semester hours every three years in administration, supervision and/or elementary school curriculum.

c. Was employed after 1962, is admitted to a master's degree program leading toward full certification, and continues to earn a minimum of six semester hours credit each year.

d. Is 62 years of age and has earned at least six hours within the last three years. This applies only to those principals employed prior to July 1, 1970.

Effective July 1, 1977, exceptions b, c and d no longer apply and all principals shall hold the South Carolina elementary principal's certificate.

B. Assistant Principal

1. The assistant principal shall hold an elementary principal's certificate or meet one of the exceptions listed for a principal.

2. He shall work under a fully certified principal.

3. If more than one full-time assistant is employed, at least one of the full-time assistant principals shall meet the standard.

C. Teacher

1. Classroom teacher qualifications:

a. Bachelor's degree or degree equivalent.

b. Certification in elementary education if teaching in grades 5 and 6 or certification in the field in which he teaches the majority of his time if teaching in a departmentalized unit grades 5–8.

c. A teacher with an elementary certificate may teach in the seventh and/or eighth grades without the issuance of a permit. Effective July 1, 1978, a teacher in the seventh and/or eighth grades must have completed a minimum of six semester hours of college credit in the subject area assigned. Effective July 1, 1980, a teacher in the seventh and/or eighth grades must be certified to teach in the subject area assigned.

d. When block-time scheduling is used, a teacher who is teaching one half of his classes in his area of certification may be given teaching assignments in subject areas for which he is not properly certified, provided that the teacher has completed a minimum of six semester hours of college credit in the assigned subject area.

2. A teacher who is not properly certified may continue to serve if he meets one of the following exceptions:*

a. Is 62 years of age and has earned at least six hours within the last three years.

b. Has less than a bachelor's degree, was certified prior to 1945, and maintains a South Carolina elementary teacher's certificate by earning a minimum of six hours every five years.

*Effective July 1, 1977, all middle school teachers must meet the standards listed in (1) above.

3. In an emergency situation, a teacher who is initially employed or one receiving a new assignment may be permitted to teach out of his area of certification provided he earns at least six semester hours credit annually to remove certification deficiencies. A permit must be issued annually by the Department of Education for each person scheduled to teach at least 50 percent of the time out of his area of certification.

D. Guidance Counselor

1. Each guidance counselor shall hold a certificate in either elementary or secondary guidance.

2. Exceptions will be made for a counselor with a minimum of six semester hours in courses required for guidance certification provided he continues to earn at least six semester hours per year toward proper certification. A permit must be issued annually by the Department of Education for each person meeting requirements under the exception.

E. Librarian

1. Each librarian shall meet the certification requirements for a librarian.

2. Each teacher–librarian shall meet the certification requirements for a teacher–librarian.

3. Exceptions will be made for the following:

a. A librarian or teacher–librarian with a minimum of six semester hours in courses required for library certification provided he continues to earn at least six semester hours per year toward proper cetification. A permit must be issued annually by the Department of Education for each person meeting requirements under the exception.

b. A librarian or teacher–librarian who is 62 years of age provided he has earned at least six hours within the last three years. (This exception no longer applies after July 1, 1977.)

F. Teacher Aide, Library Aide, Clerical Aide

1. A school district may employ secretaries and aides to be assigned as assistants to professional staff.

2. Aides helping with the classroom instruction or program shall meet the following requirements:

a. Be supervised by a regular teacher.

b. Have at least a high school diploma or State high school equivalency certificate.

c. Participate in preservice and inservice training programs for aides.

d. Be at least 18 years of age.

G. School Nurse

Each school nurse shall possess a current license issued by the State Board of Nurses to practice as a professional registered nurse or a licensed practical nurse.

H. Health Certificates

All professional and nonprofessional personnel shall have an annual physical examination. Certification that the person is free of contagious disease, including tuberculosis, must be filed in either the school, area, or district office.

XIV. Curriculum

The middle school in South Carolina shall provide a curriculum to meet the specific needs of pupils during their late childhood and

early adolescence. The curriculum shall be designed and instructional materials provided so that each pupil can continue his education from his own levels of learning when he begins middle school and progress at rates and in depths suited to his own needs, learning styles, and interests.

Schools wishing to use innovative programs that require a deviation from standards must receive prior written approval from the Chief Supervisor, Accreditation and Educational Improvement Section.

Organizational patterns and teaching methods selected should be flexible and varied in order to develop a personalized program for each child and foster explorative learning. Time allocations in subject areas listed below neither suggest departmentalization nor dictate daily organization for instruction. Scheduling and organizing for learning is left to the administrators and teachers in the school or district. Schools may exercise options to vary from the minimum required minutes in one or more areas provided such variation is justified and prior approval is obtained from the Chief Supervisor, Accreditation and Educational Improvement Section.

A. Language Arts

Each school's curriculum shall provide instruction in language arts in all grades for at least 250 minutes weekly or its equivalent.

1. The language arts program in the middle school shall consist of listening, speaking, reading, literature, writing, and spelling.

2. Special instruction in reading should be provided for at least 250 minutes weekly for all pupils reading two or more grade levels below their grade placement. This may be offered either separate from or as a part of the regular language arts program.

B. Mathematics

Each school's curriculum shall provide instruction in mathematics in all grades for at least 250 minutes weekly or its equivalent.

C. Science

Each school's curriculum shall provide instruction in science in all grades for at least 200 minutes weekly or its equivalent.

D. Social Studies

Each school's curriculum shall provide instruction in social studies in all grades for at least 200 minutes weekly or its equivalent.

E. Health and Safety

Each school's curriculum shall provide instruction in health and safety concepts in all grades for at least 75 minutes weekly or its equivalent.

F. Physical Education

Each school's curriculum shall provide instruction in physical education in all grades for at least 75 minutes weekly or an equivalent. Physical education shall be an integral part of the school program, exclusive of lunch and recess.

G. Exploratory Programs

1. Each school's curriculum shall include opportunities for aesthetic and creative experiences, career arts, and personal development programs for all pupils for at least 150 minutes weekly.

    a. Electives in art and music shall be provided in all grades.

b. One or more of the following electives shall be provided:

Industrial Arts
Practical Arts—Crafts
Personal Typing
Introduction to Agriculture
Introduction to Career Education
Introduction to Consumer and Homemaking Education
Others selected by the school

2. Other exploratory experiences should be provided within the regular curriculum. These may be units of study, learning activities, and/or mini-courses.

H. Special Education

Each school district shall provide for handicapped children who have psychological or physiological impairments but who are judged to be able to profit from specialized curriculum or regular instruction for the homebound.

I. Alcohol and Drugs

See page 34 of the section, *Secondary Schools.*

XV. Homebound Instruction

A. Homebound instruction sponsored by State funds shall be limited to three weekly periods of one hour each. If more instruction is needed, the school district or other interested persons must provide the additional funds. There is no limit to the amount of instruction that may be provided with funds other than State funds.

B. When visiting a home, the teacher shall teach the student or students in a room especially set aside for the period of instruction. The room is a school classroom and must be so utilized.

C. Students who because of illness, accident, pregnancy, or congenital defect cannot, even with the aid of transportation, be assembled in a school are eligible for homebound or hospitalized instruction given in the home or hospital.

XVI. School Facilities

A. Existing

1. Buildings and grounds shall be adequate in size and arrangement to accommodate the program offered.

2. Buildings and grounds shall be kept clean and comfortable to protect the health of pupils and teachers.

3. Each room shall be designed and equipped to serve specific purposes for which it is used. Adequate lighting, ventilation, and heating shall be provided in all areas housing pupils and staff.

B. New

All new school plant facilities and the school site shall meet minimum requirements listed in "South Carolina School Facilities Planning and Construction Guide" and "South Carolina Guide and Minimum Specifications for Construction of Relocatable Classroom Buildings." These publications are available from the State Department of Education.

XVII. Summer School

A. Organization and Administration

1. Each summer school shall have a certified principal or assistant principal designated as director of the program.

2. Teacher-pupil ratio should be in keeping with the needs of the individual pupil with regard to his program of study.

3. Each summer school shall have access to library services during the entire school day. It is recommended that the library be open at least 30 minutes before and 30 minutes after school.

4. Provisions should be made for the necessary materials and equipment for a balanced program in each respective area.

B. Qualifications of Teachers

1. The qualifications of each classroom teacher shall be the same as those of the regular term.

2. Each teacher in special enrichment areas, such as art, music, and physical education shall be certified in his area of specialization.

C. Curriculum

The curriculum of the summer school should be based on both individual and group needs of the pupils in attendance. There should be a twofold purpose in determining the program offered during the summer session.

1. Provision should be made to correct learning difficulties determined by standardized tests, teacher opinion, and examination of the cumulative record of the individual pupil. Hence, the summer school should be clinical in nature.

2. Provision should be made to offer areas of a nonclinical nature such as art, music, or drama.

RATIONALE

Through extensive study and research, educators have generally agreed that the educational offerings of our public schools should be designed and developed to meet the needs of each child at each stage of his development. If this concept is used as a basis for a school program, then each student would be assured of a personalized curriculum geared to his own abilities, aspirations and potential. Such a program facilitates individual growth and progress through a K-12 continuum.

The middle school is an attempt to provide instruction and materials for students who are no longer children and not quite adolescents. This period of time in an individual's life is usually thought of as the pre-adolescent stage encompassing ages ten through fourteen. Grades 5–8 or 6–8 are usually equated with these ages. Schools including these ages or grades must be the vehicles to facilitate many innovative practices and to focus the entire school program on the individual. Each child must have opportunities to grow and develop according to his own unique capacities and abilities.

Middle school education must provide students with experiences that will help them develop positive self-concepts and become functioning, mature human beings in today's complex, interdependent society. This segment of a child's education must encourage the acceptance of added responsibilities and opportunities to make his own choices as to what courses he will study, what materials he will use, where he will study and how he should be evaluated to determine the knowledge he has gained and retained. Accomplishments like these cannot be realized without a close teacher-pupil relationship, through which the teacher is able to provide personalized programs and is readily available for consultation with the student.

To implement a program specifically designed for the pre-adolescent, each middle school must strive to create a learning environment that is flexible. Emphasis is on developing the pupils' independence and increasing their ability to work with abstractions. The curriculum provides for the continuous progress of each child in academic skills and experiences contributing to personal development and responsible citizenship.

Although many functions of the middle school are shared with elementary and secondary schools, planned opportunities and activities in the middle school must be developed with the following major purposes in mind:

1. To help each child understand himself as a developing person.

2. To prepare each child to understand and accept his new role as a developing adolescent.

3. To foster independent learning and self-direction.

4. To provide experiences designed to assist each child in clarifying his values and those of others.

5. To provide instruction in and application of the decision-making process.

6. To permit wide exploration of personal interests.

7. To ensure every child a degree of success in understanding underlying principles and key concepts of the organized disciplines.

8. To build upon basic skills acquired in elementary school.

9. To promote maximum growth in basic communication and computational skills.

10. To make learning exciting.

11. To emphasize learning experiences that will help the child make appropriate choices in the more specialized secondary school.

In order to accomplish these goals, teachers are more important than facilities. The success of the school will be determined more by people than by purse. The middle school concept embraces the premise that education should be concerned with more than the acquisition of knowledge; students do not become functioning members of society

simply by accumulating information. The pre-adolescent must be exposed to educational experiences that will teach him how to learn, how to critically evaluate his ideas and values, and how to develop interests and attitudes as he relates to individuals, peer groups and society.

Although education for the middle school child is distinctive, the program must be in harmony with the elementary school and the high school if the K–12 continuum is to be a reality, not just a rationale.

Flexibility, one of the fundamental principles on which the middle school is built, must be a major characteristic that prevents the school's program from becoming a static, non-changing entity. Although the middle school must be organized to accommodate changes, educators must not let flexibility cause instability and ineffective school operation.

The infinite variety of seashells inspires us with faith in our own individuality.

MIDDLE SCHOOL STUDENT

The 20th century has been one of accelerated change in virtually all aspects of life – technology, mass communications, religion, science, health, economy, societal relationships. Today's children – whose environment has been a whirlpool of change – will be the citizens of the 21st century, when change promises to be even more dramatic.

Pre-adolescents, ages ten to fourteen, experience significant physical, psychological, social and intellectual changes during this period of their development. These young people are in the age which some have called "transcendence," the period between childhood and adolescence – a perplexing, and sometimes traumatic, age. During this stage of human development, changes are rapid and variable.

At no other age span do children show greater differences in their physical, moral, emotional, social and mental development than during these "middle" years. Each change has an effect upon the others which add up to make a unique person. Factors influencing pre-adolescents are many and varied, and relationships between these factors are often unknown or unpredictable.

Muriel Crosby, in a summer conference at the University of Florida, described pre-adolescents: "These children are neither 'fish nor fowl.' They are not truly children nor have they reached the full flowering of adolescence. In school they are often characterized by their teachers as the most difficult to live with, the most effervescent emotionally, the most unpredictable in behavior, and the most ambivalent in their reactions to the adult world of authority."

"These are the youngsters whose inner world is critically affected by developmental change and whose outer world is in economic, social and political revolution. They are finding their way, making their place, and are often discovering little to live by in a school world which was especially created for them by past generations of educators, the junior high school."

Generalities are difficult at this age, when individuals go through the most rapid growth in size of their entire lives. Growth is by spurts, defying measurable averages of height, weight or the onset of puberty. Likewise, emotional, moral, social and intellectual differences encompass a wide span.

Diversity of maturity is the pattern. The growth spurt in girls begins anywhere from ten to thirteen years of age, while boys begin their growth spurt later, from twelve and one-half to fifteen.

Authorities generally agree that today's ten- to fourteen- year-olds mature physically sooner than their parents or grandparents did. The onset of menstruation is usually at the age of twelve or thirteen, compared to fourteen in 1900, but it may start as early as ten or as late as sixteen. Boys exhibit a similar range in the beginning of sexual maturity.

Common characteristics among pre-adolescents and early adolescents do exist, however, although they vary with each individual. In general, they are the marks of emerging maturity from childhood. These characteristics include:

1. Yearning for acceptance and approval by friends, frequently exhibited in conformance to group standards, values, attitudes and "fads." While still adhering largely to family standards and using their own homes as the base for operations, pre-adolescents begin to test rules and assess reasons for obedience, rather than reacting with a childish fear of punishment. This sometimes appears to be — and sometimes is — "rebellion against authority," especially if restrictions and regulations seem arbitrary to the adolescent.

2. Restructuring their personal moral and cultural values — including religion, personal relationships, school and sex. This search for moral and social values often requires reconciling values established at home, at church or in early schooling with those of schoolmates who have different values and standards.

3. Intense interest in their own personal appearance and their own physical growth and skills, often reflected in habits of early dating and a fondness for competitive sports and games.

4. Subjective moodiness and introspection, reflecting insecurity and tensions during this transitional period of challenging their own childish behavior and values.

5. Eagerness to accept responsibility and accomplish things to satisfy themselves, please others, and avoid feelings of guilt.

6. Adjusting to the opposite sex, a transition from childhood interests mainly confined to their own sex, including hero-worship and "crushes," to later natural boy-girl relationships. Dawning sexual urges usually take the form of teasing and exploring such symbols of adulthood as "sophisticated" clothes, cosmetics, "bad" words, smoking, and drugs, rather than the more direct interest of older teenagers.

7. Ambivalence between maturity and childishness between strong loyalties and deep disappointment, between children's games and more mature activities, hobbies and social events, between resenting adult "interference" and seeking adult approval and support.

8. Growing intellectually and developing new ways to process information and perform schoolwork and other mental tasks. How young people think varies according to their background, past experiences, interests, talents and abilities. Development of logic, rational thinking, abstract reasoning and other evidences of mental maturation vary with each individual, but such diversity is "normal."

9. Broadening interests which fluctuate rapidly and frequently as self-concepts change; "fads" come and go, abilities and talents develop. It's a "trying" time as pre- and early adolescents "try" new personalities, new standards, new experiences and often "try" the patience of parents, teachers and other adults and youth.

10. Intense emotions which may magnify problems, personal relationships and events out of proportion to their importance — leaving small, if any, middle ground.

11. Restlessness, both physical and mental, requiring physical movement and intellectual "stretching," exploration and diverse opportunities to satisfy their curiosity and interests, rather than sitting constantly; talking, not just listening; changing pace and materials, rather than "the same old thing."

During these vital transitional years, pre-adolescents have many important needs, which are not unique to their age. Significant among these basic needs are:

1. To be recognized and accepted as individuals and as members of a group.

2. To be loved and to love.

3. To be secure without being smothered by protection.

4. To be independent within reasonable limits of dependence and responsibility.

5. To explore and to learn by experience and by their own mistakes without feeling unduly threatened.

". . .Pioneer creative programs designed specifically for the early adolescent learner."
—Eichhorn

THE TEACHER

The middle school should be staffed with teachers who know the unique characteristics of the transcendent child and who sincerely care about him. No instructional program can be implemented successfully without well-qualified, dedicated teachers. Success is enhanced when the faculty functions as a team to individualize instruction and when learning experiences are child-centered, rather than subject-centered.

Profound changes in the role of the classroom teacher have occurred within the past several decades. These modifications are, to a large extent, reflections of larger societal changes which have occurred during this era of unprecedented change.

First, there has been a shift from an earlier diversified role to that of an educational specialist in one or more basic fields of learning. Whereas each teacher was formerly assigned a wide array of responsibilities, the tendency now is to develop specialty areas within subject matter fields and then supplement these specialties with additional specialists, such as counselors, school psychologists, and curriculum coordinators.

Second, the teacher's role has evolved from being exclusively or predominantly a source and dispenser of information to that of a catalyst, a facilitator of learning. Now, teachers' prime obligations are to stimulate discovery and inquiry and to serve as consultants for individualized independent study. Teachers must be able to mobilize the appropriate resources needed to remedy each particular educational need.

Finally, teachers must be eager for continual educational training if they expect to be effective. No longer can teachers effect changes in their own lives or those of their students with only those tools acquired by receiving their minimum educational training. Teachers must recognize that they need continuing, meaningful inservice education and further college study.

Although these qualities for teachers are important in all schools, they are more relevant in the middle school due to the unique characteristics of this particular child. People who fill teaching positions in the middle school should be educators who can answer these questions affirmatively:

1. Do you like active, energetic students?

2. Are you flexible and sensitive to quick changes in students' moods and needs?

3. Can you establish rapport with students?

4. Do you believe and practice the middle school concept and philosophy?

5. Are you enthusiastic about working with pre-adolescents?

6. Do you possess a variety of skills, abilities, and talents?

7. Do you believe in the importance of allowing each student to be creative?

8. Are you knowledgeable in curriculum area(s) assigned and able to facilitate learning for the student?

9. Can you work in close collaboration with fellow teachers in cooperative planning and team teaching?

10. Are you receptive to innovation and change?

11. Are you physically, socially, and intellectually alert?

12. Have you a sense of humor?

13. Do you display tolerance, compassion, and understanding?

14. Do you feel that patience is a basic ingredient of your personality?

15. As a teacher-counselor, do you know students well enough to give them individual personal and educational guidance?

16. Are you familiar with the principles of group dynamics and the nature of adolescent behavior?

17. Can you implement teaching strategies which use exploration and discovery as the process of learning?

18. Can you resist the temptation to always give answers, and sometimes raise questions instead?

19. Are you imaginative and willing to try several approaches in your efforts to reach children?

The teacher's role today is to analyze learning patterns, construct learning programs for each student and carefully monitor progress in relation to individual goals.

Challenge the gifted, encourage the indifferent, stimulate all.

ADMINISTRATION

With only ten to fifteen years of experience behind it nationally, the middle school movement is not yet settled enough for comprehensive study or evaluation. But its rapid growth since the 1960's demands that attention be drawn to the need for enhancing the education of emerging adolescents. An effective middle school provides adequate time for exploratory experiences and eases the transition from elementary to high school.

Administrative and instructional leaders must plan efficient use of time, space, personnel, content, methods, and media. The differentiations among these ingredients provide the organizational flexibility so necessary for the diverse group of youngsters they serve.

The Principal

The principal should be an educational manager who accepts instructional leadership as his major function. He should be directly involved with the instructional program. He no longer can limit his direct involvement to approving or disapproving expenditures and handling other administrative matters concerned with the physical operation.

Since these are the school years when dropouts crystalize, potential leaders develop and future adults search for their identity as individuals in society, the most dynamic administrative leadership the school system can afford should be provided. Furthermore, this is not a place where the school system should practice skimping on staff.

Clara Chiara and Elizabeth Johnston, in an article in the January, 1972, issue of Clearinghouse state that "the school which was established to provide a transitional experience for the early adolescent has become a transitional school for teachers. This intermediate school too often serves as a proving ground for the neophyte, a depository for elementary or secondary misfits, or a wayside station for those waiting for senior high or administrative positions."

The Assistant Principal or Curriculum Coordinator

Assignment of a curriculum coordinator should be seriously considered either as an additional position, or as a major function of an assistant principal. This unique school, where supportive learning replaces teacher-centered activities, requires an increased amount of curriculum materials. Continuous acquisition and efficient coordination of varied learning materials could best be accomplished by a curriculum coordinator within the school.

The establishment of this position would help ensure immediate acquisition of required materials as they are needed by teachers. The curriculum coordinator would also make it possible for teachers to spend more time working directly with students as well as coordinate effective inservice education programs for all staff members.

Para-Professional

Para-professionals can fill vital roles in preparing materials, supervising groups and performing other routine duties, thus freeing teachers to teach and to provide for particular, individual student needs. The talents and abilities of aides add depth and variety to the instructional program as well as relieve teachers from tasks that do not require a high degree of skill.

Scheduling

The variety of scheduling patterns include periods, blocks of time, or more individualized independent scheduling. Class periods may vary according to requirements of the academic subject and needs of the class, the teaching team and the school.

To work up to their potential, these children should be grouped and re-grouped as the need arises according to abilities, achievement, maturity and interest. Variety should be evident in grouping patterns used. Effective grouping can challenge the gifted, encourage the indifferent and stimulate others.

The elimination of bells may be considered a step toward stressing individual responsibility. Class changes should be the result of the time requirements of learning activities rather than a standard schedule.

Varying lengths of class periods and changing activities and classrooms at different times would also avoid the "stampede" of the entire student body in hallways at the same time.

Public Relations

Parents, community leaders and the general public should be made aware of the school's goals. All segments of society are often bewildered by the behavior of middle-schoolers. The school staff should interpret the pre-adolescent's behavior as a manifestation of rapid growth and maturation. All school personnel must clearly demonstrate that the school is not only aware of the problem, but is also specifically organized to accommodate youth of this age and their concerns at a difficult time of their lives.

Public support and appreciation for the total school program can be increased greatly by interpreting the school's purpose, program and procedures in correlation with needs of this age group. Public relations is an integral factor in a successful middle school; the consequences of neglecting it can be disastrous. Many innovative, effective middle school programs have been abandoned because of adverse opinions by uninformed or misinformed people in the community.

Parents and other citizens can become actively involved by serving on advisory and special task force committees or by serving as volunteer classroom assistants, tutors, guest instructors, hosts for tours and field trips or as members of the P.T.A. Those not actively involved can be kept informed about the school's goals and activities through newspaper feature articles, TV and radio shows, exhibits and demonstrations.

Public attitudes and desires are always important. Too often, public views are aired only when a bond issue is at stake or when a group of "concerned citizens" begins to apply pressure to school administrators. The educational welfare of children is the mutual concern of school personnel, the home and the community. Communication and active participation keep interest alive.

Exploratory Experiences

In addition to a strong academic program, another goal of the middle school is to provide the student with an opportunity to explore a number of different areas of interest. Exploratory offerings should

consist of a number of activities, suggested by the students and teachers, that are mutually appealing. If a teacher or volunteer can provide guidance and instruction in an area of interest to students, it should be offered. Clubs should be organized informally – and changed – according to students' interests.

Examples of exploratory experiences which could be selected are as follows:

Current events
Handicrafts
Stamp collecting
Quiet games (such as bridge, chess)
Astronomy
Model cars or model planes
Sewing for fun
Shell and rock collecting
First aid
Square dancing
Debate
Drama
Photography
Cooking for fun
Scientific experiments
Public speaking
Creative writing
Etiquette and social problems
Child care
Girl talk

Such pleasurable activities strengthen the students' basic academic and physical skills and foster their social and emotional growth while still allowing them to enjoy their childhood.

Among the many reasons advanced for a middle school is the need to escape the unwholesome pressures of too-early high school social activities and the interscholastic rat race which often plague students, especially at the seventh and eighth grade levels. Middle schools should, therefore, delete from their school activities the graduation exercises, overnight trips, formal dances, and sports banquets. This school must represent a significant departure from the past – not just a new label for an old model.

. . . "exploration and experimentation"
–Nesbitt

TEACHING STRATEGIES AND ORGANIZATIONAL PATTERNS

Research studies and years of experience with children have expanded the store of knowledge about how children learn. Briefly, a combination of characteristics of the individual child determines how he learns best in a given situation. In other words, such factors as learning activities, teacher, materials, mode and time, which contribute to one student's successful learning in math may not help him learn concepts in social studies. In addition, those factors responsible for one student's success in math may not be effective for another's mastery of the same math objective.

Since schools are intended to facilitate learning, we must capitalize on this knowledge and move toward more varied teaching strategies and flexible organizational patterns. The middle school concept, a new one with no mandated procedures, encourages us to become innovative in our approach to schooling.

TEACHING STRATEGIES

The outcomes of teaching in the middle school must not be geared exclusively to the accumulation of knowledge and the mastery of skills. Development of a spirit of inquiry, openmindedness and resourcefulness, necessary for success in our demanding technological age, are equally important.

The nature of the middle school pupil requires numerous learning experiences that encourage him to experiment and explore and to work with others as well as alone. In addition, he needs to participate in daily decisions about the direction and content of his educational endeavor.

The middle school teacher must arrive at a variety of strategies that will provide pupils with learning experiences which are most appropriate to their stage of growth and development. Descriptions of some of these strategies follow.

Discussion

Although effective discussion can occur in a class-sized group, small-group discussion in which all students actively participate is more appropriate for middle school youth. The purpose of a small group discussion may be problem-solving, brainstorming, creative analysis or values-clarification. Pupils need to be given the opportunity to learn discussion techniques, improve listening skills and gain an understanding of group dynamics.

Questioning

Questioning is intended to stimulate learning rather than be a tortuous inquisition. Questions should be planned carefully, keeping in mind at least these three levels of cognitive development.

Knowledge – "Identify (list) the ways that people pollute our environment."

Comprehension – "Describe the effects of pollution on living things, including man."

Application – "Develop a plan to reduce pollution in our community."

Inquiry

Inquiry is learning that is initiated and controlled by the learner as a means of expending his own understanding. Student activities are planned so that the learner is presented with a series of problems, questions or issues to resolve. He gathers data, builds and tests theories in an atmosphere in which he assumes more and more responsibility for his own behavior. Inquiry techniques can be used in all academic areas, and by individuals, pairs or small teams of students.

Role-Playing and Creative Dramatics

Having pupils play the roles of real people or imaginary people in lifelike situations can be effective in teaching concepts and skills. By placing themselves in different situations, students have the opportunity to make historical events come to life, to experience the feelings related to real-life situations or conflicts, and to express their ideas or solutions to problems.

Other forms of creative dramatics, such as puppets, marionettes, dance and interviews of students and adults, can be used to accomplish the same purposes. Composing original plays, television shows and films are other useful techniques that can be employed. Pupils plan, build scenery, make costumes, produce and "act" in their own story, not in a professionally written play.

Resources

People, places and things add excitement, interest and new ideas to schooling. The community can provide "experts" in everything from bricklaying (think of the inherent math, chemistry, career and economics concepts) to plastics synthesis and more.

Use "things" – from the natural environment, from the attic, from business and industry – to stimulate learning. As an example, a soft drink bottle found on the way to school led to a study of glass, advertising, bottle caps, and an analysis of the beverage.

Try field trips just outside the school door or across town, county or state. Opportunities for young people to see, hear, smell, talk, and touch makes learning come alive.

Individualization of Instruction

Individualization of instruction grew out of the recognition that children have different learning styles and learn at different rates.

Basic principles of individualized instruction include the following.

1. The learner assumes more responsibility for his own learning.

2. Students differ in the way they learn.

3. Greater emphasis is placed on learning than on teaching.

4. Learning objectives or concepts should be clearly written.

5. Learning objectives or concepts may be achieved in different ways.

6. Assessment or evaluation is criterion-based (diagnostic) rather than norm-based. It is used both before and after pupils

participate in learning activities, for program planning or for pupil placement and assessment of mastery.

7. Students contribute to program development and change.

8. The role of the teacher changes from a disseminator of information to a facilitator of learning.

Individualization of instruction should not be confused with independent study. Human interaction should be maintained. Individualization involves not only individually prescribed learning activities, but also various learning modes: i.e., small- and large-groups and one-to-one (including peer tutoring).

Organizational Patterns

Organizational patterns are selected in light of the purposes or goals of the educational program and the characteristics of the clientele – the children. The teaching strategies just described and the concepts on which they are based can be employed in the self-contained and departmentalized school. However, they are more easily implemented through an organizational pattern that provides more flexibility and variety in scheduling and more efficient utilization of teacher strengths, time and interests.

Brief descriptions of several possible alternatives follow. References for further study are included in the bibliography.

Semi-departmentalization

The departmentalized program can be modified in various ways. For example, several departments can be reorganized to form interdisciplinary clusters such as Humanities, Communications or Unified Arts. Or, teachers in two or more departments can cooperatively plan for and teach the same group of students, such as social studies – language arts.

Modular Scheduling

Instead of a standard fifty-minute period, the school day is arranged in modules, or time periods, of varying length. Modules may

be of any length – 10, 15, 20, 25, 30 minutes or longer. The smaller the length of the module, the more flexibility. Modules are grouped for varying blocks of time and are regrouped as program requirements change – daily, weekly and monthly.

Some form of cooperative or team teaching is incorporated in order to correlate disciplines, provide flexible grouping patterns and utilize various learning modes. As an example, a four-member team teaches the same group of 120 students during a fourteen-module block of time, modules being fifteen minutes in length. The team is responsible for mathematics, language arts, social studies and science. Within that time block, an individual student's schedule has extensive variations – including the amount of time spent on any one subject and in any one learning mode.

Allotment of time for teacher-pupil program planning is essential for effective modular scheduling.

Cooperative Planning/Teaching

Cooperative planning occurs when two or more teachers develop instructional programs together for a group of children. The product of cooperative planning by a science teacher and a social studies teacher could be an interdisciplinary unit of work, such as in ecology, which coordinates the science and social studies curriculum. The unit may be taught cooperatively by sharing students, teaching responsibilities and activities.

Similar arrangements of cooperative planning and teaching may also take place within a single discipline.

Team Teaching

Team teaching is a type of instructional organization in which two or more teachers, working together, are given responsibility for all, or a significant part, of the instruction of the same group of students.

Teams can be organized:

1. Within a grade and within subject areas (6th grade science team).

2. Within subject areas but across two or more grades (6th, 7th, and 8th grade language arts team).

3. As interdisciplinary teams which function
   a) across subject areas and within a grade level OR
   b) across subject areas and across two or more grade levels (multiaged).

The interdisciplinary team is the type frequently employed by the middle school because it facilitates individualization of instruction.

All teachers on the team participate in the planning, teaching and evaluating cycle. Emphasis is placed on the effective utilization of the strengths of each team or faculty member. Toward this end, a team member may take primary responsibility for planning in one curriculum area and assist other team members in teaching and evaluating in that area. However, it does not mean "turn teaching" or that Teacher "A" teaches mathematics – and only mathematics – to part of the group, while Teacher "B" is teaching science – and only science – each day.

Differentiated staffing is commonly included in a team-teaching organizational pattern. Team-teaching programs emphasize varying group sizes and time periods based on instructional objectives, content, techniques and student needs. Provision of planning time for teams during the school day is absolutely essential.

More flexible space enhances team teaching because of the opportunity for variation in group size. Many middle school facilities have been built with open-space areas and moveable walls. Older buildings have been renovated.

The team teacher's role differs from that of the traditional teacher. Successful teaming is the result of appropriate training for teachers in group process, communications skills and planning procedures. Without the vital ingredients of training and teacher acceptance of the team-teaching concept, it is best to follow a more traditional approach.

Nongrading

If a middle school chooses to implement a program of individualized instruction, then grade level barriers can be dropped. Some retain grade levels for accounting purposes only and provide a curriculum designed to foster continuous progress through skill levels, regardless of the pupil's age or grade designation. Others group youngsters across grade levels as illustrated in the description of team teaching.

In a nongraded school, a continuum of learning objectives to be mastered in each academic area is provided. It is recognized that a student's progress may not be uniform; he may jump ahead in one area, lag behind in others and work at three or four different levels in as many subjects. His progress is determined by comparing his attainment to his ability and both to a long-term view of the ultimate accomplishments that are deemed desirable.

"Emerging adolescents are more in need of and more open to the benefits of personal guidance than any other age group."

—Nan Coppock

GUIDANCE AND COUNSELING

Young people are affected by all who touch their lives. Parents, siblings, peers, teachers—all influence them consciously or unconsciously, positively or negatively, and often innocently.

The effective school guidance program is a management plan, scientifically based on human behavior theories. It is personally and cooperatively implemented by principals, teachers, counselors, other staff and peers. Parents and other community citizens are frequently involved.

The developmental emphasis provides services which are beneficial to all students, assisting them continuously in building upon their strengths in the interactions of the cognitive and affective domains. The need for remediation and crisis counseling is lessened as the developmental program becomes strengthened.

It is essential that all adults who work with middle school students have a basic understanding of human growth and development and of learning theory. No human can be fragmented into parts. Each is an integrated whole who responds to others, to school and to learning tasks. How he perceives himself and how he thinks others perceive him is of utmost importance, for what he feels to be true concerning himself determines his behavior.

The attitudes of adults who are important to him make indelible impressions on his life. During pre- and early adolescence, his greatest needs are for support, reinforcement and guidance from home and school. As he struggles to become a self-reliant person, each student needs numerous opportunities to make choices.

Of major importance in the middle school is individual developmental timing. The child's sense of independence may be seriously impaired by pressures for which he is not intellectually, emotionally, socially or physically ready.

The way a child sees himself has a major effect on the way he lives his life. Teachers and parents must provide ample opportunity for each child to experience some success daily. This is possible only when tasks

are on his level. Contemporary educational researchers agree that a child with high self-esteem responds to challenges and troublesome conditions, achieves success and is likely to be enterprising, active and exploratory.

On the other hand, a considerable body of evidence indicates that the child with a poor self-concept is more anxious, less well-adjusted, less popular, less effective, less honest, more defensive. Children with poor self-concepts do not learn well. A positive change in personal-social adjustment can be correlated with gain in educational achievement.

Thus it is clearly the responsibility of the school to aid each student in evaluating himself as positively as possible through happy and successful social, emotional and academic experiences. Developing positive attitudes toward school and toward learning – so that the child learns to want to learn – are affective objectives. When these affective needs are considered, positive attitudes toward school increase.

A developmental guidance program will facilitate positive changes in middle school students. Their self-concepts will be improved; peer relationships will be bettered; and attitudes toward school will become conducive to academic achievement.

What is "a developmental guidance program"? It is a total school program to facilitate individual growth which is positive in regard to self, peers, adults and academic achievement. It is a coordinated effort by all members of a school staff to provide maximum experiences to enhance and facilitate the "developmental tasks" of the "critical periods" in the life of the middle school student.

In simple terms, it is continuous human relations education which promotes happier pupils moving successfully from one step to another in each classroom. Two additional outcomes are happier teachers and appreciative parents.

To meet these children's needs, emphasis is placed on early recognition of intellectual, emotional, social and physical strengths and weaknesses, appreciation and development of talents, prevention of conditions which interfere with learning, and use of available resources.

Role of the Guidance Counselor

As education changes from its traditional stance to a more child-centered one, the guidance program spreads from the counselor's room into classrooms. A developmental program requires far less need

for remediation and crisis-centered counseling. Emphasis is now on the counselor's working on a team with other staff members to provide assistance to students in class.

Teachers have long been seeking ways to help children conduct themselves in an acceptable manner and learn with greater success and pleasure. Today's middle school counselors continue to develop their skills to assist teachers in meeting these objectives. Coordinated planning with teachers has become the priority to which counselors devote most of their time. Each and every child thus benefits continuously from the guidance program.

Some South Carolina schools have data showing impressive academic achievement, reduction in suspensions, reduction in referrals for disciplinary reasons, increased attendance and improved home-school relations resulting from effective guidance by counselors, teachers and principals. Observation and evaluation from involved teachers, pupils and parents indicate happier children and adults.

Another vital role of the counselor is communication with parents and community agencies. Traditionally, school-home contacts have been made only when negative situations or conditions existed. Through the guidance approach, parents are informed of positive aspects of their children's experiences. Many programs have been implemented to develop parents' knowledge and skill in rearing children effectively. This results in a full-team effort for the child rather than in the parental antagonism which has been evident in the past.

The guidance role of the counselor, then, is to identify, plan and implement a developmental program to meet the needs of each child. This will involve the knowledge and skills of significant adults and the support of peers.

Even in the most effective school, there are times when counseling sessions are necessary. The counselor then meets with the children involved in the guidance room behind closed doors. In a crisis, counseling begins with the child, teacher or parent who seeks assistance or is referred. Frequently, others involved are brought in for group counseling. Strict confidentiality is maintained. The counselor must not divulge any information to anyone.

When group counseling sessions are taped for follow-up discussion by students and counselor, the counselor should first record the verbal consent of each individual student to having the session taped. After the purpose for recording has been achieved (such as enabling students to hear exactly who said what in an angry exchange or conflicting

statements), the confidential tape should be erased immediately. No tapes should be kept permanently or heard by anyone other than participants.

In a crisis, removing a child from the problem situation relieves pressure on the pupil, class and teacher. However, one counseling session cannot change his attitudes and beliefs. In severe cases, he will need a series of sessions because when he returns to the classroom, he must practice the coping skills he learns.

Hence, the counselor and staff together must build, throughout the school, a climate in which each student is treated as a person. In such an atmosphere, the student has opportunities to practice behaviors which lead to emotional and social adjustments and academic achievement.

Basic Guidance Services

Developmental guidance involves a cooperative effort on the part of all school personnel in assisting the child in understanding himself and others, his opportunities and responsibilities, so that he may become purposeful in his approach to educational experiences and to life.

Guidance is a method of personalizing the educational process. Because of daily contact, the teacher has the opportunity to know the concerns of each child and implement sound guidance practices; the counselor supplements and supports these services.

In developmental guidance, orientation to new experiences is continuous. As various concerns of students are identified, activities are designed to assist pupils to meet and to move with ease through problem situations. Well-planned activities provide avenues for effective individual adjustment to middle school:

1. Physical facilities
2. Unfamiliar practices and procedures
3. Staff and services
4. Curricular offerings
5. More highly organized, independent classroom activities
6. Specific subject area approach to instruction
7. Flexibility of scheduling
8. Understanding one's own stage of development
9. Intramural programs

A comprehensive human-development service provides valid, useful information on careers, education, personal-social development and professional services for students, parents, and school personnel. Basic objectives include:

1. Developing a broad and realistic view of life's opportunities

2. Creating an awareness of the need for accurate educational, career, and personal-social information

3. Assisting in mastery of techniques of obtaining and interpreting information for progressive self-direction

4. Promoting attitudes and habits which will assist pupils in making choices conducive to personal satisfaction

These objectives may be achieved through such techniques as:

1. Group guidance for pupils
2. Group guidance for parents
3. Group counseling
4. Team conferences (pupil, teachers, parents, counselor)

Career development for middle school pupils is aimed at helping them explore general future choices. Emphasis is placed on the total lifestyle of which occupation is a part. Career information is disseminated through subject area content in classrooms and through special guidance activities.

Teacher and counselor work together in such activities as:

1. Establishing relevancy of course content to careers
2. Career interest groups
3. Bulletin boards and displays
4. Field trips
5. Career fiction and biographies

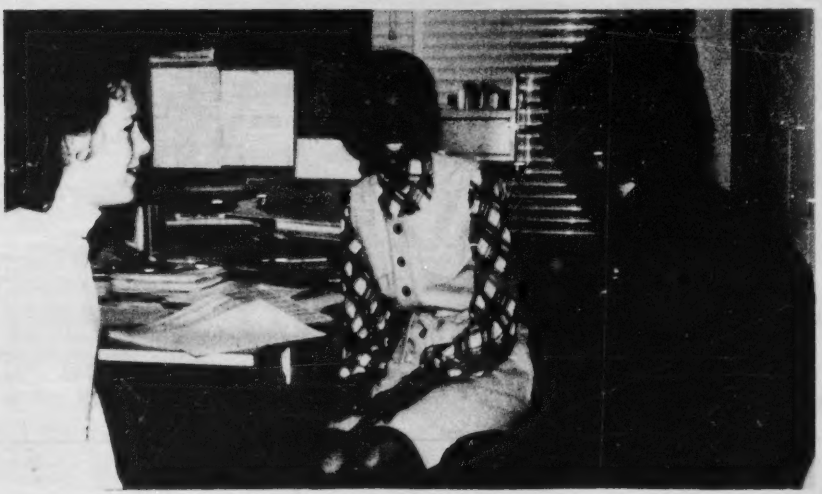
The pre- and early adolescent of the middle school needs much information in the personal-social area. Each needs to know that he is an important person, to understand himself, to develop a positive self-concept, to learn how to get along well with peers, parents, teachers, and to become self-motivated.

The principal plays an important role in the coordinated guidance effort because of his responsibility for inservice sessions and workshops. He encourages teachers to strengthen their natural skills in working with middle school pupils and to learn new guidance techniques.

Counselors' greatest opportunity to make immediate and enduring contributions to lives of students lies in the area of social-personal concerns. They must never be content with only those skills learned in their guidance training, but must pursue knowledge of current psychological theories and techniques and their classroom application.

Through additional courses, reading, ETV presentations, workshops, conferences and active membership in professional organizations, counselors receive reinforcement, information and inspiration through which to implement greater service to students. Exchanging ideas with other middle school counselors is an excellent way to keep up with some of the splendid programs in South Carolina and other states in the nation.

With teachers, the counselor can develop activities and attitudes which will meet academic, psychological, social, emotional and physical needs in the life of each child. Children will learn to behave "acceptably," grow academically, and develop those values, attitudes and achievements which will enable them to become well-adjusted, successful, contributing members of a democratic society.



PUPIL PROGRESS ASSESSMENT

Assessing the progress of pupils involves much more than the traditional method of: 1) giving youngsters a series of exercises and tests; 2) marking them with alphabetical or numerical grades; 3) averaging the grades at the end of specified periods of time; 4) recording grades on a permanent record; and 5) reporting to parents on THE REPORT CARD "exactly" where children stand academically. Logical consequences of this procedure have historically included

parents
who in anger or disappointment
punish children
who in anger, fear or resentment
blame teachers
who in frustration
blame parents . . .

in a vicious and expanding circle.

As early as 1912, American educational researchers were documenting the predominantly negative results of such a system. In 1920, efforts were made by enlightened educators to establish a reporting process which would communicate strengths and weaknesses rather than labels to parents and pupils.

With the emergence of the middle school philosophy, child-centered administrators and teachers are again seeking to develop a process through which they will no longer report ON children but will, instead, communicate WITH pupils and parents concerning individual patterns and rates of growth in both the cognitive and affective domains.

Teacher, parent and child must perform as a team determined to reach the goal of the pupil's achieving to his optimum. This objective may be attained only through mutual knowledge and understanding of the process as well as the role each must play. Communication must be open and specific in all matters. The team must agree to the objectives of the program. The team must accept the activities which lead to achievement of the objectives. The team must recognize growth toward objectives. Hence, continual evaluation must be performed jointly by the teacher and pupil and immediately communicated in some form to the parent.

The simplest and most effective form of evaluation is the verbal or written comment on a small achievement: a check mark on a correct answer rather than the traditional cross mark on an error; a positive remark rather than the traditional negative one; a telephone call to the home when the child has done something well rather than the traditional negative call; a happy note rather than the traditional critical one. Success – not failure – creates self-motivation in the human – and children are human!

Academic progress of each student must be measured in relationship to his own ability, effort and performance. The degree and quality of his accomplishments should be measured in comparison to his own growth. He should not be compared to his peers. Each pupil's work should be evaluated on his own level for each objective.

The purpose for evaluation must be kept constantly in mind by pupil, parent and teacher. This purpose is not to label, not to provide a reason for punishment or fear but is to identify those skills and concepts the child

1. has already mastered;
2. needs to study and practice further;
3. is ready to learn.

When evaluation and communication with parents are utilized in this humanistic manner, they become positive tools to provide the continuing successful experiences which children need. Self-motivation is thus nurtured.

Replacing the threatening procedure of "reporting" with an encouraging one, administrators and teachers are faced with several concerns which must be resolved simultaneously. Teachers and parents must thoroughly understand the meaning and purpose of each step. Generally, children respond gratefully to having their successes stressed rather than their failures, and they frequently intensify their efforts to improve academically and behaviorally.

One effective middle school plan includes a variety of communication techniques.

Recognizing that children experience some concern or fear about their progress in the early weeks of their first year in the middle school, an Interim Report is sent home at the end of their first month. Each teacher completes a three-copy form: one for the parent; one for the teacher files; one for the cumulative folder.

INTERIM REPORT

STUDENT'S NAME _____

SUBJECT TEACHER _____ SUBJECT _____

PERIOD _____ ROOM NO. _____ DATE _____

NOTICE TO PARENTS: THIS REPORT OFFERS AN OPPORTUNITY FOR BETTER UNDERSTANDING OF THE STUDENT'S CURRENT ACHIEVEMENT. PLEASE STUDY THE COMMENTS BELOW IN ORDER THAT STEPS CAN BE TAKEN TO BRING ABOUT PROGRESS, WHERE NEEDED, BY THE END OF THE PERIOD.

61

51

RECENT PROGRESS: ☐ GOOD ☐ AVERAGE ☐ POOR ☐ OTHER _____

PRESENT STATUS: ☐ PASSING ☐ BORDERLINE ☐ NOT PASSING ATTENDANCE: ☐ REGULAR ☐ IRREGULAR

GENERAL ATTITUDE TOWARD WORK: ☐ APPEARS TO TRY ☐ IS INTERESTED ☐ NOT INTERESTED ☐ CHANGES FROM DAY TO DAY

☐ IS GENERALLY OPPOSED ☐ OTHER _____

RECOMMENDATIONS

☐ INCREASED PREPARATION FOR CLASS ☐ INCREASED PARTICIPATION IN CLASS ☐ MORE SERIOUS APPROACH ☐ MORE REGULAR ATTENDANCE

☐ BETTER WRITTEN WORK ☐ CONFERENCE SHOULD BE SCHEDULED (TEACHER, PARENT, STUDENT) ☐ HELP AFTER SCHOOL NEEDED

☐ OTHER _____

_____

TEACHER _____

At the close of each nine-week period a single card is used to indicate pupil progress in all subject areas in relation to his own potential. The reverse side gives information concerning his characteristics related to his work.

PUPIL PROGRESS REPORT

19____-19____

Pupil _____

Subject _____

Subject Teacher _____

Homeroom No. _____ **Homeroom Teacher** _____

Explanation of Grades:
A — Excellent B — Good C — Fair D — Poor F — Unsatisfactory

Conduct Grade:
S — Satisfactory, N — Needs Improvement, U — Unsatisfactory

	SUBJECT GRADE	CONDUCT GRADE	ABSENCES	PARENT'S SIGNATURE
1				
2				
3				
4				
Yr.				

	Nine Weeks Period			
ASSETS	1	2	3	4
well-prepared for class				
good classroom participation				
brings in homework				
enthusiastic about classroom act				
well-behaved				
cooperative				

DEFICIENCIES	1	2	3	4
needs to bring materials to class				
often late to class				
seldom participates in classroom				
seldom brings in homework				
shows little interest in school				

RECOMMENDATIONS	1	2	3	4
increased preparation for class				
better written work				
increased participation in class				
please call me for a conference				
more regular attendance				
help after school needed				
more serious approach				

Progress

1

2

3

4

The third phase of reporting is the parent-teacher conference. It is at this time that the parent learns the level of his child's performance.

This communication must be conducted in a constructive and open manner emphasizing what the child has accomplished and indicating ways the parent may assist in further growth.

The Interim Report, telephone calls or letters may be used at any time a teacher wishes.

Positive communication with a parent helps the child and forms a friendly link between home and school which encourages parent cooperation if a problem arises.

The nature of the "teenager" indicates the urgent need for a close working relationship between the home and the school. Cooperatively, these two institutions can greatly enhance the life of the middle schooler and ease the self-doubts and frustrations he feels at this difficult time in his life.

CURRICULUM

AST
Spellit

LANGUAGE ARTS

As students enter their middle school years, they begin to experience basic changes in both their physical and intellectual makeup. It is upon these very important changes that an effective language arts program should be based during these years, for these students function at neither the elementary nor the secondary level. Their interests and needs are at a unique stage of development; and language, being the vehicle for their personal communication and understanding, takes on special significance. Accordingly, the middle school language arts program should reflect these important facets of physical and intellectual growth in both content and method: what it proposes to do, and how it proposes to do it.

Traditionally, the language arts curriculum is approached in two ways: through skills areas and through content areas. The four skills (reading, writing, speaking, and listening) are necessary for effective communication by students in every phase of their schooling; these skills become especially important during the developmental and maturation stages of the middle school period. Skills, however, are not in themselves a "subject to be studied" during these years; they are rather the all-important vehicles for studying the three content areas of literature, grammar and composition. For example, rather than "study reading," the student should develop his reading skills through a rich and varied literature program. In other words, he learns how to read and write by actually engaging in these activities.

An effective middle school language arts program will reflect a purposeful blending of skills and content, so that the student can come to know himself with confidence and to express himself with clarity.

Objectives

Basic goals which should be considered for the middle school language arts program include the following, stated in terms of student performances.

In grammar, the student can

1. analyze the basic components of the simple sentence.
2. differentiate between fragments and sentences.

3. transform a personal thought to a sentence.
4. write more than one type of sentence.
5. elaborate personal thoughts into a paragraph.
6. differentiate connotation and denotation.
7. display understanding of language as a system of symbols.
8. discern dialect differences without prejudice.
9. exercise the concept of appropriateness in language.
10. denote the difference between grammar and usage.

In literature, the student can

1. identify the basic characteristics of the drama, short story, essay, folk tale, myth, ballad, fable and poem.
2. experience continuing opportunity for personal reading in all literary genres.
3. differentiate realism and romanticism in all literary genres.
4. express both objective and subjective personal reactions to characterization.
5. discern figurative language in all literary genres.
6. participate in both formal and informal dramatizations.
7. interrelate setting, plot and character.
8. appraise modern literary selections (music, poetry, drama, stories, etc.) according to historical standards and values.
9. apply values and understandings in literature to a personal context.
10. develop an understanding of the major themes recurring in literature.

In composition, the student can

1. express a clear thought in a simple sentence.
2. develop a paragraph to show unity and coherence.
3. demonstrate competence in the use of the most common punctuation marks.
4. show variety in the use of sentence types in written composition.
5. demonstrate the ability to argue and conclude in a structured composition.
6. develop an idea through logical comparison and contrast.
7. appreciate the importance of standard spelling practices.

8. demonstrate legibility in penmanship and clarity in written vocabulary.
9. understand the reasons for differences in grammar, vocabulary and pronunciation with regard to writing and speaking as two separate modes of communication.
10. develop a personal impression with logic, clarity and sequence in an essay.

Equipment

In general, language arts teachers in the middle school should have on hand all the equipment needed to enhance and enrich the ongoing classroom instructional program. Such equipment would provide heightened experiences in a great variety of language arts activities—experiences in communication which the teacher or the students could not themselves provide.

Included would be tape recorders, record players, movie projectors, overhead transparency projectors, filmstrips and slide projectors. Special attention should be given to the growing number of middle school ITV programs available on a regular schedule from the State's Educational Television network. Many of these programs are designed especially for the middle school ages and would be excellent enrichment vehicles for language arts instruction.

Materials

To reveal and to relate—these are the primary considerations in choosing materials for the middle school language arts program. So far as communication is concerned, students at this age level are undergoing two major developments: heightened self-awareness and increased curiosity about the "adult" world. Accordingly, material should be selected which will both reveal the world and relate it to them as individuals.

Ultimately, through the use of a great variety of classroom materials which provide continuing opportunities for him to communicate competently and confidently with himself and his particular world, the middle school student should come to the realization that his English class is not about a certain textbook or set of materials—but about him.

Reading

The middle school reading program should reach every student and provide for continuous growth in line with capacity. In addition to improving basic abilities, there should be a closer concentration upon developing specialized abilities and study skills required for reading subject matter in content fields.

Reading is more than an accumulation of isolated skills, more than word study and vocabulary building, and more than sentence, paragraph and chapter reading. It is an activity in which the individual seeks to identify, interpret and evaluate the ideas expressed by a writer.

Learning to read is both a developing and a continuous process which is not necessarily completed at any given time in an individual's life. Every step in learning to read is dependent upon what has gone before.

The general objectives to be considered in developing an effective reading program for the middle schools are

1. To help students build up the various reading skills they need.
2. To motivate students to improve their reading.
3. To teach students to apply reading skills in the reading of other subjects.
4. To provide them with materials on a level that they can read with reasonable effort.
5. To develop reading interests and reading tastes so that they will continue to read outside the school.

Since normal growth in reading usually tends to be continuous and developmental in nature, reading instruction in grades 5-8 becomes an extension of the developmental program begun in the lower grades. For some students, this period is actually a continuation of the basic skills program. For other students, it is a time of refinement. For this reason, the teacher should know all the reading skills learned at an earlier level. These skills would include the following.

A. Vocabulary
   1. Word recognitic
   2. Prefixes and suffixes
   3. Meaning of words

B. Word Attack Skills
   1. Phonic and structural characteristics of words
   2. Vowel sounds
   3. Context clues
   4. Dictionary skills
   5. Glossary

C. Comprehension
   1. Outlining
   2. Following directions
   3. Drawing conclusions
   4. Reading for verification
   5. Locating information
   6. Critical reading

D. Oral Reading
   1. Choral reading and poetry
   2. Listening appreciation

Students learn how to interpret the context for the one specific meaning intended, to read critically, to expand their vocabulary and to develop lasting reading interests, tastes and appreciation. The middle school reading program should endeavor to develop the reading potential of every individual student.

Reading materials and equipment are of central importance in the reading program. They should be selected to fit objectives of the program and to fit specific student needs.

An adequate supply of reading materials would include

- Up-to-date reading textbooks and workbooks
- Multilevel textbooks for teaching subject matter
- Wide variety of multilevel, multisensory, high interest material
- An assortment of muitilevel paperback books
- Reading games
- Newspapers and magazines
- Other supplementary materials found in "A Pocketful of Reading Materials" (a booklet available from the S. C. Department of Education, Curriculum Section, 810 Rutledge Building, Columbia, S. C. 29201)

Basic equipment would include

Tape recorder with jack for listening station
Listening station with six or eight head sets
Record player with jack for listening station
Filmstrip previewer (one or two)
Filmstrip projector
Table and chairs
Storage space

MATHEMATICS

The middle school years afford opportunities for firming up mathematical concepts and skills that have been explored and developed in prior years. It is also a time for extending and developing new ideas for tying concepts and procedures together for more meaningful understanding and use. Perhaps it is time to add a bit of sophistication to mathematics for those who can benefit from it. The informal, intuitive approach used in prior learning experiences should be continued with this age group.

Objectives

Some goals which apply to all middle school students with varying degrees of relevance include

1. Assisting students not only to know how to solve problems, but also to have some understanding of the process used and why it yields a correct solution.
2. Providing opportunities for students to participate in inductive reasoning processes whereby they learn to draw conclusions, generalize, and make feasible conjectures.
3. Developing an understanding of and an appreciation for structural properties of mathematics and the roles they play in the problem solving processes.
4. Promoting use of appropriate vocabulary and symbolism for enhancing learning and communication of mathematical ideas.
5. Utilizing drill and practice, through games and novel procedures where possible, to develop control and proficiency of skills learned.
6. Generating through informal ways a feeling for validating answers and procedures and instilling a sense of proof.
7. Developing an appreciation for the historical evolvement of mathematics and its contributions to past and current society.
8. Creating an atmosphere in which students gain enjoyment and confidence in their ability and knowledge of mathematics.

Course Content

It would be rare to find a group of mathematics educators who agree on the mathematics content for the middle school program. Perhaps much common ground could be found but exceptions would probably prevail.

Obviously, some middle school students have not mastered K-4 content. Others will have progressed beyond the usual eighth grade program and other appropriate content must be provided.

The following is an attempt to delineate a reasonable list of content for the average middle school mathematics program without regard to the extremes. From this suggested list, teachers can generate appropriate objectives to meet the needs of most middle school children.

A. Basic Ideas
   1. Mathematical symbols
   2. Set vocabulary
   3. Definitions

B. Numeration
   1. Write, read, understand place value and regrouping in set of whole numbers to one hundred million and in set of decimals from tenths to millionths.
   2. History of number systems
   3. Set of integers (whole numbers and their opposites)
   4. Exponents and scientific notation

C. Addition
   1. Addition with regrouping, using whole numbers, decimals, whole numbers and decimals
   2. Commutative and associative properties of addition and closure
   3. Addition of integers
   4. Identity element

D. Subtraction
   1. Subtraction with regrouping, using whole numbers, decimals, whole numbers and decimals
   2. Subtraction of integers
   3. Additive inverses

E. Multiplication
   1. Multiplication of whole numbers, decimals, whole numbers and decimals

2. Commutative and associative properties of multiplication; distributive property of multiplication over addition and closure
3. Identity element

F. Division
1. Division of whole numbers, decimals, whole numbers and decimals
2. Distributive property of division over addition from the right

G. Fractions
1. Express rational numbers, as appropriate, in common fractions, equivalent, proper, improper and mixed numeral forms
2. Ordering fractions
3. Add, subtract, multiply and divide rational numbers represented in proper, improper and mixed numeral forms.
4. Inverses
5. Express common fractions as decimals and as percent, and percents as decimals and common fractions

H. Applications
1. Problems involving addition, subtraction, multiplication, division in the set of non-negative rational numbers (whole numbers, decimal numbers, fractional numbers)
2. Problems involving rate, time, distance, percent, money, measurement, ratio, proportion, denominate numbers
3. Commutative, associative, distributive properties in facilitating problem solving
4. Open sentences and formulas in problem solving

I. Function
1. Ordered pairs
2. In-put/out-put rule

J. Geometry
1. Concepts, definitions, identifications
   a. Point, line, plane, space
   b. Congruent: angles, triangles, line segments
   c. Perpendicular and parallel: lines, planes
   d. Polyhedrons, circles, cylinders, cones, spheres
   e. Transformations of plane figures
2. Metric and English measurement
   a. Length: line segments, perimeters

b. Area: polygon, circles
c. Volume: polyhedrons, cylinders
d. Weight
e. Angles, arcs

3. Constructions
   a. Line segments, angles, triangles, circles
   b. Congruent: angles, triangles, line segments
4. Pythagorean relationship

K. Number Theory
1. Patterns
2. Prime and composite numbers
3. Greatest common factors and least common multiples
4. Divisibility rules, factorization
5. Squaring, square root

L. Probability and Statistics
1. Graphs
2. Cartesian plane
3. Scale drawing
4. Organizing and describing data
5. Mean, mode, median
6. Sample spaces and probable outcomes

M. Logic
1. Mathematical statements
2. Connectives: and, or
3. Truth sets (solution sets)
4. Inductive reasoning
5. Venn diagrams

Materials

The informal, intuitive approach recommended for teaching mathematics in the middle school implies that a variety of materials are needed. The laboratory approach, coupled with efforts to individualize, dictates the use of manipulative devices and physical models. It also calls for visual materials, audio tapes, filmstrips, games, practice materials, enrichment books, and, perhaps, films and television tapes.

Supplementary as well as basic instructional materials should be built into learning centers which give students opportunities to become actively involved in the learning process.

SCIENCE

The aim of science education today is "scientific literacy" for all citizens. A scientifically literate person not only understands the conceptual schemes and processes of science but can also apply this knowledge. Therefore, a science program must include a series of related activities that contribute to the student's ability to interpret scientific information and to understand its applications and limitations.

Students of varied ability levels and backgrounds can work together within a given conceptual scheme although involved in activities of diverse complexity. Concepts are more durable than facts, tend to be more relevant, and provide a framework from which to interpret new phenomena. They can be oriented toward the concrete for immature students and toward the abstract for the more mature.

Processes of science involve numerous skills, a mode of inquiry and, of necessity, many activities that will help students develop these skills. Since processes are behavioral in nature, they may form a basis for assessing student growth. The processes themselves must be consistent with the child's mental growth and development.

If the principal purpose of education is to help students learn to think, then science, if taught by inquiry, is perhaps one of the best vehicles to develop this ability. Students need to know how to learn. Mastery of the processes of science can contribute to the total learning abilities of the student because of their high transferability. They must have actual experience in problem solving. Development of these skills is necessary if people are to collect and process the data needed to make everyday decisions.

To acquire desirable attitudes and behaviors in science (success, enjoyment, appreciation, enthusiasm), students need knowledge and skills that are usually associated with cognitive objectives. Therefore, the skills emphasized and the concepts understood can lead, not only to "scientific literacy," but also to the development of attitudes and values.

Objectives

Performance objectives are recommended because they are more easily understood by students and more easily evaluated by teachers.

Because of variations in students, behavioral objectives will be individualized and highly varied at any given time in any classroom.

Since teachers are responsible for assessing the individual needs of students, they should work with the students in setting reasonable goals and objectives.

The National Science Teachers Association lists these general goals for scientific literacy, whereby the student:

1. "uses science concepts, process skills, and values in making everyday decisions as he interacts with other people and with his environment.
2. understands that scientific knowledge depends upon the inquiry process and upon conceptual theories.
3. distinguishes between scientific evidence and personal opinion.
4. identifies the relationship between facts and theory.
5. recognizes the limitations as well as the usefulness of science and technology in advancing human welfare.

6. understands the interrelationship between science, technology and other facets of society, including social and economic development.
7. recognizes the human origin of science and understands that scientific knowledge is tentative, subject to change as evidence accumulates.
8. has sufficient knowledge and experience so that he can appreciate the scientific work being carried out by others.
9. has a richer and more exciting view of the world as a result of his science education.
10. has adopted values similar to those that underlie science so that he can use and enjoy science for its intellectual stimulation, its elegance of explanation, and its excitement of inquiry.
11. continues to inquire and increase his scientific knowledge throughout his life."

Basic Concepts

A. Living things change.
   1. Individuals experience growth and development.
      a. Plants and animals are influenced by internal factors such as hormones, genetics, vitamins.
      b. Plants and animals are influenced by external factors such as light, temperature, nutrients.
   2. Human beings change and are influenced by internal and external factors (such as psychological, physiological, social).
   3. Populations change.
   4. Living things are products of heredity and environment.
   5. Living things interchange matter and energy with the environment.

B. Man is interrelated with his environment.
   1. Man is a part of and dependent on his biotic environment.
   2. Man is affected by and can affect his environment.
   3. Some changes are reversible, some not; some resources are renewable, some limited.
   4. The biotic environment is the most complex level of

organization; therefore, decision makers must weigh conflicting values.

5. Cyclic phenomena in the biosphere are pervasive.

C. The earth changes.

1. Present characteristics may be used to interpret the earth's past and predict its future.
2. The earth is like a spaceship (scientific model).
3. Atmospheric conditions change and create daily weather.
4. There are forces in the earth, on the earth and in the universe that cause the earth to change.
5. The earth is a source of resources.
6. Water and air interact with soil and with each other.
7. Man can influence the earth's changes for his welfare or his ultimate harm.
8. Time is a unit of measurement.
9. The dynamic ocean is an important part of the earth's surface.

D. Energy changes.

1. Electrical energy can be observed, measured and explained (static electricity, currents, circuits).
2. Energy exists in a variety of forms (radiant, kinetic, sound, light, electricity) and can be changed from one form to another (electromagnet, electric light, etc.).
3. The sum of matter and energy in a closed system remains constant.
4. Man uses knowledge of energy (machines, motion, sound, etc.).

E. Matter changes.

1. Matter has certain characteristics or properties.
2. Matter undergoes chemical and physical change.
3. Changes in matter cannot occur without changes in energy.
4. Objects and systems interact.
5. Matter can be measured (volume, weight, density).

F. The universe changes.

1. Events and properties of objects in the universe can be viewed from several frames of reference.

G. Scientific method and social implications.
   1. Physical phenomena in the environment can be observed, measured, and explained.
   2. Cause and effect relationships may be simple or complex.
   3. Skills in the use of science equipment and literature are needed to understand the nature of science and to solve problems. Problem-solving skills include
      a. accurate observation and classification.
      b. data collection and recording.
      c. accurate measuring.
      d. stating and testing hypotheses.
      e. making generalizations and drawing conclusions.
      f. communicating.
      g. predicting.
   4. Scientific research has values and limitations and the information of science is tentative and limited by the skills and techniques of the scientist.

Materials

It is difficult to structure a science curriculum that would meet the needs of all schools in the state. Since local school personnel are most conscious of the needs of their students, they have the responsibility to design a curriculum to meet these needs.

District educators may decide to adopt a commercial program, adapt one or several commercial programs to their overall plan, or create a new program. Much time and expense is usually involved in creating programs. However, due to the lack of materials specifically for middle schools, some teachers are designing their own materials especially suited to their own students, community resources, and local environment.

When textbooks are a basis of the curriculum, they should facilitate inquiry and encourage extensive laboratory experiences. The use of audiovisual material as well as printed material should be an integral part of the learning experience.

A curriculum should be based on a study of needs and interests of the students in that community and a thorough survey of new science programs and materials. No curriculum should be chosen without looking at the whole picture of the child's science education.

To assist the school district in development of a curricular plan and choice of materials, three possible programs have been designed for K-12. The ten- to fifteen-year-old student should be considered within this continuum.

Detailed curriculum guidelines may be found in *Science Education K-12, Administrator's Planning Guide,* including examples of commercial programs and other materials described in the chart of curriculum models, which can be obtained from the State Department of Education, 810 Rutledge Building, Columbia, South Carolina 29201.

An effort has been made to design programs to meet the needs of students having different learning styles and of teachers who feel more comfortable in a given method of instruction. The highly structured program emphasizes consecutive development of concepts and skills in grades K-6 and provides for an annual division by subject in grades 7-12. The moderately structured program tends to be more interdisciplinary and laboratory oriented. Being more student-centered, this program requires a student-oriented, rather than subject-oriented, philosophy.

The loosely structured program is more student-oriented. It provides greater freedom for teacher and student to develop learning experiences more suited to student concerns and interests. This program is especially suitable for children who learn best from concrete rather than theoretical materials and in an atmosphere free from threat and structural requirements. The poor reader and potential dropout would be more apt to succeed in this type of program.

Facilities and Equipment

Science equipment should be simple and safe. Whenever practical, it should come from the environment of the students and they should have a part in obtaining and caring for it.

The key to optimal science facilities is flexibility. Within this flexibility, there should be provided

1. an area where individual children can keep personal belongings, think and do paper work.
2. an area where students have the experience of working in groups of three to five without obvious teacher control. Equipment for small group activities is less expensive than that for individual activities.

3. a laboratory equipped with electricity, water and necessary tools and equipment.
4. an area for performing demonstrations.
5. an area where students may work on the floor in such activities as working with the reflection of light beams, studying live animals, or drawing large maps or charts, more efficiently performed on the floor.
6. an area for bulletin board space and tables for displays.
7. an area for independent study with film loops, tapes, records and slides.
8. an area for reference materials.
9. an area for adequate storage: some supplies and equipment need to be kept in locked cabinets; acids in protected and ventilated storage.

Student tables should be flat and not permanently fixed to the floor. A class-lab should be large enough to provide a minimum of 40 square feet per student (excluding storage) with additional associated areas for preparation, storage and individual and small group project areas.

Facilities outside the school building are vital. The school yard, museums, acquaria, zoos, botanical gardens, parks and nature areas are important for development of skills and concepts of science, for without adequate physical facilities, a good science program is improbable.

ENVIRONMENTAL EDUCATION

Environmental literacy is one of the basic goals for the students of South Carolina. This has been defined to include knowledge concerning the environment and man's relation to it, skills for managing and improving the environment, and the attitudes and values necessary to motivate action in maintaining environmental quality for all living things.

Environmental education is one of the most interdisciplinary topics today. It can link subject matter fields and reinforce the existing curriculum. It can provide relevance and meaning for existing curricular material. It can encourage students to investigate their local community environment in an effort to reinforce subject material and provide a working knowledge of the human ecosystem.

Here children become aware of the need for intelligent utilization of resources, of the responsibility of individuals and groups for wise social action.

Here children have an opportunity for learning, for growing, for feeling and self-discovery in the natural environment with other living things.

Here children can be involved in areas of real concern—concern about the quality of life, about foods that are unsafe to eat, water that is unsafe for swimming, and sometimes air that is unsafe to breathe—concern about the quantity of resources and energy.

Here children learn where their material goods come from and what happens during their transformations.

Here children learn how decisions are made, why they are made, and how policies can be changed.

Here children can explore their environment without someone telling them what they are supposed to find—they can begin to know their environment intimately and really care about it.

Here each individual child realizes that he has an impact on the ecosystem. He can enhance it or degrade it. EACH INDIVIDUAL IS IMPORTANT.

Objectives

The objectives of an environmental education program for the middle school are no different than those for any grade level. In designing the program, a rich learning environment should be provided which would include

1. Opportunities for the students to examine phenomena and relationships which constitute their environment and provide insight into the basic principles of the universe.
2. Opportunities to develop the skills of inquiry, problem solving, decision making, computation and communication through study of specific environmental situations.
3. Opportunities to clarify values and develop attitudes which influence decision making.
4. Opportunities to develop awareness, concern, and responsibility for environmental problems and their solutions.
5. Opportunities to experience success.

Environmental education must be activity-centered, concentrating on the immediate environment together with local resources. For example, what does the environment look like from your schoolroom window? What features of the school grounds could be used to help children understand erosion, predator-prey relationships, or producer-consumer relationships?

Environmental education must also be student-centered, involving students in choices and providing opportunities for them to become immersed in their environment—to see, hear, feel, taste, and, in general, experience themselves as a part of the environment—not just as passive spectators.

Environmental education, by its very nature, crosses subject and grade boundaries, providing many opportunities for team teaching and cooperative plannning.

Environmental education should be individualized and lends itself to learning centers and stations both indoors and outdoors. It can involve extensive reading and research or simple studies of the occupants of the local community.

Role playing is also an essential part of environmental education. Students might pretend to be a frog in a pool, or a real estate developer wanting to dredge the marsh lands.

Field trips are also vital. They extend the walls of the classroom to include the whole community.

There are three major concepts that form the basis for an interdisciplinary environmental program. These are quoted from *People and Their Environment,* a teacher's curriculum guide to Conservation Education, developed by the South Carolina Conservation Curriculum Improvement project.

1. Living things are interdependent with one another and with their environment.
2. Organisms or populations of organisms are the product of their heredity and environment.
3. Organisms and environments are in constant change.

Specific topics included in these concepts include

1. Change
2. Interaction
3. Community
4. Interrelationships (predator-prey, consumer, producer, decomposer, territory, etc.)
5. Succession (from rock to soil, from pond to climax forest)
6. Energy - sources and flow (food chains, food webs, energy pyramids)
7. Adaptation
8. Niche and habitat
9. Patterns (water cycle, nitrogen cycle, patterns on bark, leaves, etc.)
10. Economics
11. Civic responsibility (political and acceptable social methods for solving problems)
12. Values and man as a part of the ecosystem
13. Population - impact on the ecosystem
14. Predicting
15. Vulnerability of ecosystems

The state guides for environmental education contain many lessons which could be used to supplement a variety of subject areas. They can also furnish ideas for learning stations. Station activities can involve small group activities, such as a study of animal or plant

populations, or individual activity as a student uses A-V or printed material to obtain additional information. Examples include

1. Studying weather in earth science
2. Determining the effect of running on heart beat in physical education
3. Measuring the diameter or height of a tree in math
4. Digging fossils or using tree rings to learn of past climates in history
5. Learning how to pass a law in government
6. Examining textures and shapes of things—from the brick of the building to the bark on the tree—in art.

In language arts, listening skills, observing skills and classifying skills are improved as children describe their outdoor experiences. These experiences can also improve skills in communication—speaking, writing and especially in reading—as children express themselves in poetry, story or perhaps Haiku.

Through environmental education, students can obtain knowledge about the mutual dependence of man and his environment; they can develop skills to deal with environmental problems; they can develop attitudes and values necessary to maintain and enhance a healthy, harmonious environment. They can develop a positive self-image and feel more capable of sharing their future environment.

Facilities

Expensive equipment is not necessary. An old log, an eroded area, a shovel to dig a soil profile, some weather equipment, a compass and things that the students can make themselves are examples of inexpensive equipment. Many good publications are available to assist the teacher. An outdoor lab or nature trail is helpful but not essential. The environment is there—a far more exciting place than any school, a far more exciting teacher than any person. Why not use it to enhance the learning experience of children?

SOCIAL STUDIES

The social studies are areas rich with opportunities for middle school youngsters to develop critical and creative thinking processes rather than an accumulation of factual material to be memorized. The middle school curriculum must be concerned with both intellectual and affective development. Values clarification, awareness of feelings and attitudes, and the analysis of social issues must accompany the learning of skills, concepts, generalizations and other cognitive processes.

Fifteen goals adopted by the National Council for the Social Studies can be adjusted to learning needs of students at this level. They are

1. Recognition of the dignity and worth of the individual.
2. Use of intelligence to improve human living.
3. Recognition and understanding of world interdependence.
4. Understanding of the major world cultures and culture areas.
5. Intelligent uses of the natural environment.
6. Vitalization of our democracy through an intelligent use of our public educational facilities.
7. Intelligent acceptance, by individuals and groups, of responsibility for achieving democratic social action.
8. Increasing the effectiveness of the family as a basic social institution.
9. Effective development of moral and spiritual values.
10. Intelligent and responsible sharing of power in order to attain justice.
11. Intelligent utilization of scarce resources to attain the widest general well-being.
12. Achievement of adequate horizons of loyalty.
13. Cooperation in the interest of peace and welfare.
14. Achieving a balance between social stability and social change.
15. Widening and deepening the ability to live more richly.

There can be many variations, interpretations and applications of the above goals, and it is recommended that each teacher do just that to meet the needs of pupils.

The concept spiral approach included in the elementary school curriculum should be continued during the middle school years with generalizations increasing in complexity and abstractness. An

interdisciplinary approach is considered best, with the following included: anthropology, economics, geography, history, political science, psychology, and sociology.

Sequence in the course of study is not considered "sacred" but, for continuity, consideration should be given to the following order:

The United States with special emphasis on geography, history and economics in a world setting.

Neighbors of the United States - Canada and Latin America - with major emphasis on Western culture in its development and relationship to life in the United States.

Nations outside the Western Hemisphere which have most influenced United States development and current issues. The main focus may be on Europe, Asia, Africa. Such study must of necessity be limited in depth to several areas of units in each of

the continents or countries studied. At least two to three units should be on a non-Western culture.

A Study of South Carolina and its relationship to the United States. Included should be opportunities for assessment of the state's weaknesses and strengths at every stage of its development.

New ways should be sought to motivate the middle school child. Traditionally, content has been a chronological progression through an era or the development of a country. Or, pupils studied "all about" each country, colony or state. In developing the curriculum, consideration should be given to moving from the identification of a:

	(Example)
Key Concept	Diversified Economy
↓	↓
Main Idea	Some countries have developed diversified economies while others have not.
↓	↓
Specific Content	Economic structure of Brazil, Mexico, Argentina, Bolivia

This new approach provides for the selection of content samples which through detailed study will develop the main idea (generalization). Emphasis is placed on relationships and contrast. An inductive approach to teaching social studies is one alternative considered desirable for the middle school. Through the pursuit of concepts and generalizations based on relevant facts and details, the social studies will excite and interest the contemporary pre-adolescent.

Equipment and Materials

Every classroom should be equipped with basic audiovisual equipment such as a T. V. set, screen, projector, slides, filmstrips, overhead projector, globes, charts, maps, atlases, South Carolina and United States flags, etc.

HEALTH AND SAFETY

The major thrust of health education in the middle school is to provide learning experiences and activities in the cognitive and affective domains which will enable boys and girls to make intelligent decisions for their personal health and safety. This includes knowledge of the relationship between health services and healthful environment.

The broad areas that should be included in the curriculum for the middle school child are listed below, followed by the objectives for each concept. The source for these is the working draft of the South Carolina Department of Education health guide, *Health Problems: You Make the Decision: Grades 6-8.*

Physical Health

Body Structure and Function

1. To assist the students in understanding the basic anatomical structure of the body and its related functions.

2. To enable them to appreciate the complexity of the human body and the interdependency of the body systems.
3. To help them recognize the need to conserve and protect their bodies to achieve optimum health.

Cleanliness and Appearance

1. To enable the students to apply their knowledge of the structure and function of the skin to its care and protection.
2. To help them appreciate the importance of grooming and personal appearance in developing self-confidence and positive mental health.
3. To enable them to develop a respect for the human body and a desire to provide it the best care possible.

Dental Health

1. To help the students understand that it is possible to prevent dental decay and improve gingival health in most instances.
2. To encourage them to assume responsibility for their own dental health.
3. To enable them to recognize and appreciate the dental needs of the community.

Diseases and Disorders

1. To assist the students in developing an understanding of communicable diseases and chronic and degenerative health conditions.
2. To enable them to form positive attitudes toward the acceptance of preventive efforts for disease control.
3. To encourage them to assume responsibility for the prevention and control of diseases and disorders.

Fitness and Body Dynamics

1. To enable the students to understand that activity and exercise are essential in order to maintain efficient skeletal and muscular systems.

2. To help them appreciate that wholesome physical activities are necessary for a balanced program of living
3. To encourage them to develop regular habits for participating in a variety of physical activities.

Sensory Perception

1. To assist the students in understanding how the senses contribute to the well-being of the individual.
2. To enable them to appreciate the critical nature of the senses in human life.
3. To help them understand how the senses can be safeguarded.
4. To encourage them to assume responsibility for protecting their own sense organs and those of others.

Sleep, Rest and Relaxation

1. To assist the students in understanding the influence of fatigue, sleep, rest and relaxation on total health.
2. To enable them to appreciate that environmental pressures affect the body and create a need for adjustments.
3. To encourage them to assume responsibility for a balance in purposeful activity, sleep, rest and relaxation.

Nutrition

1. To assist the students in understanding the importance of food in every stage of life.
2. To enable them to become aware of the influence of nutritional habits on personal growth and development.
3. To help them develop an understanding of the importance of handling food safely.

Mental and Social Health

Emotional Development

1. To assist the students in understanding the factors which contribute to the emotional makeup of each individual.

2. To enable them to establish proper attitudes toward interaction between individuals.
3. To help them develop an awareness of the influence of existing socio-economic structures.
4. To enable them to understand the importance of the relationship between the environment and good mental health.

Family Living

1. To enable the students to acquire information regarding their family and peer relationships as they relate to their future as adults, as marriage partners and as parents.
2. To enable them to develop a firm foundation of understanding and positive attitudes toward their families and themselves.
3. To enable them to develop love and responsibility for their family members and an appreciation of family living.
4. To assist them in acquiring an understanding of the physical, mental, emotional and social qualities necessary for the well being of the individuals as they relate to themselves and others.
5. To help them appreciate that the qualities of masculinity and femininity grow and develop through a variety of experiences and may change from time to time.

Drugs

1. To assist the students in understanding the historical background relating to the present day use of drugs.
2. To enable them to understand the effects of drugs upon their physical and mental health.
3. To enable them to explore the various laws concerned with the use and distribution of drugs.
4. To assist them in becoming acquainted with the various resource centers where assistance may be obtained in the area of drugs and drug-related problems.

Alcohol

1. To assist the students in becoming aware of current facts about alcohol and its use.
2. To enable them to understand the emotional, social, and psychological effects of alcoholic beverages on the individual.
3. To help them understand alcoholism and its causes and understand their attitudes toward drinking.
4. To enable them to become aware of the various community agencies and services concerned with alcohol and alcoholism.

Tobacco

1. To assist the students in developing an understanding of the reasons why people smoke.
2. To enable them to become acquainted with scientific facts about smoking.
3. To help them develop abilities to critically evaluate fact as opposed to fiction in advertising.
4. To enable them to recognize the economic and political influences on individual judgments in the use of cigarettes.

Consumer and Environmental Health

Community Health

1. To help the students understand the health services provided by the community.
2. To enable them to appreciate the functions of those responsible for protecting the health of the community.
3. To encourage them to accept responsibility for their own behavior in relation to community health.
4. To assist them in understanding the scope of the medical care system.
5. To enable them to become aware of health problems of people around the world.

Ecology

1. To assist the students in understanding that ecology is a living, personal field of study.
2. To enable them to appreciate the interrelationships of living things.
3. To help them to understand that man's environment and his relationship to it are important to health.

Consumer Health

1. To assist the students in becoming aware of the basic factors involved in consumer motivation.
2. To enable them to become aware of the practice of health quackery and to identify individuals practicing fraudulent techniques.
3. To help them learn the factual data that will permit them to make wise choices in buying.

Health Careers

1. To enable the students to become knowledgeable concerning opportunities open to them in the health-related disciplines.
2. To help them realize the variety of skills and talents utilized by the health-related disciplines.

Safe Living

First Aid and Emergency Procedures

1. To assist the students in developing positive attitudes toward safety and first aid.
2. To help them to be alert to safety hazards at home, school, and in the community.
3. To enable them to develop increased consideration and responsibility for the safety of others.

4. To assist them in acquiring the skills and knowledge of good first aid techniques.
5. To help them appreciate the importance of effective first-aid procedures in reducing the number of deaths and degree of disability resulting from accidents.
6. To enable them to realize the importance of community preparedness for disasters and emergencies.

Safety

1. To enable the students to develop positive attitudes toward safety.
2. To encourage them to be alert to safety hazards at home, school, and in the community.
3. To enable them to react intelligently in the event of an emergency.
4. To help them develop increased consideration and responsibility for the safety of others.

Equipment and Materials

1. Up-to-date textbooks
2. Plastic models of various male and female organs
3. A skeleton
4. Overhead transparencies on various topics
5. Additional printed materials to supplement textbooks
6. Films appropriate for various topics or problems
7. Filmstrips

For further information regarding concepts, activities and resources, refer directly to the Department's Health Guide.

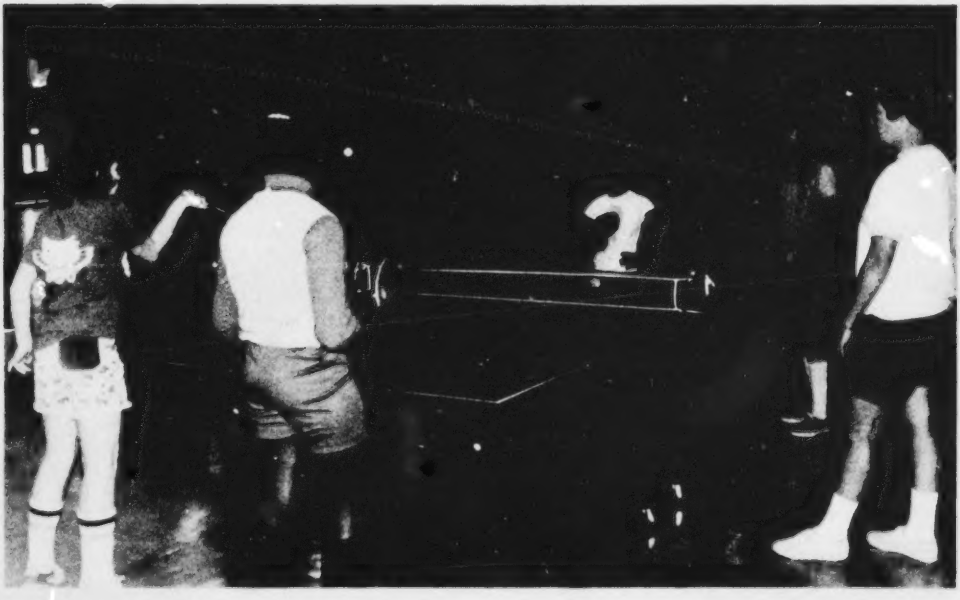
PHYSICAL EDUCATION

The middle school physical education program should be planned and taught by specialists rather than being merely a schedule of play supervised by classroom teachers.

Physical development is a vital concern for middle school students. Many diverse opportunities must be available for progressive skill development for all boys and girls and emphasis should be on the student's physical efficiency.

Both boys and girls should be encouraged to participate in individual and team activities, games of low organization, track and field events, stunts, tumbling, outdoor education, folk and square dancing, and other sports and activities.

The entire student body should have the opportunity to be successful in a variety of lifetime sports, indoors and outdoors. While choice of lifetime sports will depend on local facilities and student interests, many middle schools have inherited former high school gymnasiums and outdoor recreational areas which have great potential for diversification.



Bowling and golf may be modified with light-weight practice balls. Badminton, tennis, horseshoes, roller skating, bicycling, archery, rifle-shooting, boating, handball, soccer, camping, nature study, conservation, outdoor crafts, fishing and other lifelong physical activities should be explored and enjoyed, in addition to such traditional sports as softball, baseball, volleyball, basketball and football.

Intramural sports are encouraged, but varsity competition between schools is not recommended for grades 5-6.

Goals

1. The development of physical fitness
2. The development of useful physical skills
3. The acquisition of socially desirable traits
4. The acquisition of safety skills and habits
5. The enjoyment of wholesome recreation

Objectives

1. To develop an understanding of the rules for more enjoyable and safe play.
2. To acquire knowledge of and to perform fundamental skills in a variety of activities.
3. To develop more self-confidence, poise, cooperation and enjoyment of physical activities.
4. To develop traits and characteristics of honesty, courtesy, loyalty and self-discipline.
5. To improve physical fitness and desirable habits and attitudes toward health and physical training.

Course Content

1. Rhythmical activities
2. Game and game skills
3. Stunts, self-testing and apparatus
4. Track and field
5. Individual and dual sports

6. Physical fitness testing (grades 5-8)
7. Team sports
8. Outdoor education
9. Evaluation

Equipment and Supplies

The philosophy of the school, as expressed through the curriculum, will determine instructional materials. Available equipment and supplies will dictate the quality of the physical education curriculum. Boards of trustees should budget and earmark instructional supplies for physical education.

Student interest is maintained in a productive, challenging and innovative experience when a sufficient amount of instructional materials is available. Students should not remain inactive because of limited supplies. When ball skills are taught, one ball for every four or five students is recommended. A lack of supplies will prevent the teaching of skills.

Equipment and supplies will last longer when students are taught their proper use, and when care is taken in storage. Student participation in the distribution and care of supplies should be encouraged.

Playground Equipment

It is recommended that each school have a restricted area for permanent playground equipment such as jungle gyms, horizonatal ladders, chinning bars, balance beams, monkey rings, climbing ropes, poles and walls, and tether balls.

At least one outdoor paved area, a minimum of 40' x 60' should be available on every middle school playground.

The following list is suggested as a minimum supply of materials for a class of 30 students.

Items	Items for Class of 30	Replacement Rates
Inflators	1–2	
Croquet sets	2–4	
Marker (for plus 5 marble dust)	1–2	
Rubber soccer balls	2–4	1–4 per year
Archery equipment	4–6	
Softballs, rubber covered	2	1–4 per year
Softball bats	4	2–3 per year
Softball bases	1–2 sets	1 set biennially
Catcher's mask	2	1 every 3 years
Volleyballs, rubber	4	1 per year
Volleyball nets	2–4	1 every 3 years
Standards for nets	4	
Rubber basketballs	4	
Basketball goals	1–2 pr.	
Goal Hi (set goals – 8 feet)	1–2 pr.	
Rubber footballs	4	1–2 per year
Tether ball (volleyball type)	1–2	1 per year
Tumbling mats 5' x 10' or 4' x 8'	4–6	
Wiffle bats	2–4	1–2 per year
Wiffle balls	2–4	1–2 per year
Bowling kits	2	1 every 5 years

Items	Items for Class of 30	Replacement Rates
Whistles	1 per teacher	1 per year
Tape Measure	1–2	
Stop Watch	1–2	1 per year
Parachute	1–4 per school	
Cage ball	2–4 per school	
Hall balls	2–4	
Aero Darts	1–2	
Badminton sets	1–2	(Varies according to program)
Deck tennis rings	1–2	
Horseshoes	1–2	
Paddle tennis	1–2	
Ring toss sets	1–2	
Peg boards	1	
Toppleball	1–2	
Box hockey	1–2	
Cones (rubber markers)	8–10 per school	
Shuffleboard sets	2	
Table tennis sets	2	
Field hockey sets	1–2	

Items	Items for Class of 30	Replacement Rates
First aid kit	2	
Golf clubs and balls	24	
Tennis racket	8	
Tennis balls	24	
Tennis nets	2	
Gymnastic Equipment:		
Horizontal bar	1	
Parallel bars	1	
Rings	2 pr.	
Climbing ropes	2	
Climbing poles	2	
Slide horse	1	
Spring board	1	
Take off board	1	
Uneven parallel bars	1	
Vaulting buck	1	

Items	Items for Class of 30	Replacement Rates
Rubber playground balls 6", 8" or 10" in diameter	4–6	1–2 per year
Rubber playground balls 8" diameter	4–6	1 per year
Beanbags 6" x 6" double stitched, 1/3 full of Navy beans	12	6 per year
Short skip ropes 9'	12–16	8–16 per year
Long skip ropes 24' to 30'	2–4	2–4 per year
Record player with full amplification and adjustable speeds	1	tubes or batteries and needles annually
Records for rhythms: singing games, creative play, mimetics, folk square dancing, rope jumping, posture and physical fitness	10–20	6–12 per year
Indian clubs	10–20	1–6 per year
Jumping standards	1 pr.	
Quoits and ring toss games	2–4	2–4 per year
Aluminum crossbars	3–4	3–4 per year
Balance beam	1–2	

FINE ARTS

ART

Art in the school is both a body of knowledge and a series of activities which the teacher organizes to provide experiences related to specific goals. The sequence and depth of these experiences are determined by the nature of the art discipline, objectives desired, and by the interests, abilities and needs of students at different stages of growth.

Goals

As a result of the art program, each student should demonstrate, to the extent that he can, his capacity:

1. To participate in art activities which are valued intrinsically by the individual.
2. To perceive and understand visual relationships in the environment.
3. To become actively and creatively involved with visual art materials.
4. To increase his manipulative and organizational skills in art performance appropriate to abilities.
5. To acquire a knowledge of man's visual art heritage.
6. To use art knowledge and skills in his personal and community life.
7. To understand the nature of art and the creative process.

Course Content

While choice of art media and scope of art instruction will depend upon teacher competencies, student interests, previous experience in elementary school, and other variables in the school, the following activities are suggested.

Studio activities include

1. Two-dimensional
   a. Drawing
   b. Designing

c. Painting
d. Printing
e. Photography

2. Three-dimensional
   a. Arranging
   b. Carving
   c. Construction
   d. Designing
   e. Forming
   f. Stitching
   g. Weaving

Informational activities include

Appreciation, understanding the role of art in society
Art History
Procedures and Processes
Philosophies and Approaches in the Art Field
Vocations in the Art Field

Informational activities do not always require treatment as a separate entity. In many cases, they are an intrinsic part of the introduction, motivation, and expansion of studio processes. As such, they become a part of the large body of art learning, rather than isolated factual data.

Facilities, Equipment and Materials

The general art room in the middle school should be designed for maximum flexibility. Film or TV viewing, reading, lectures, exhibits, working in two- or three-dimensional media and extracurricular art education require special materials, equipment and space.

Every middle school with an enrollment of 500 students should have at least one general art room with no less than fifty-five square feet of work area per child. No more than twenty-five pupils should be assigned to the room at any time. Storage space should be provided for art supplies, tools and materials, equipment, and student works in process. Some storage areas should be lockable.

Basic requirements include work surfaces such as tables, art desks, counter tops, wall display areas, drawers, files, utility cards, cabinets, open and closed shelving, metal cabinets for flammable materials.

Water, with at least one large deep sink with heavy-duty taps, and water-resistant counters should be in each art room.

The room should have adequate ceiling lighting, flexible lighting over specialized work areas, and adequate baseboard electrical outlets (110 and 220 volts) for kilns.

The equipment should also include a ceramic kiln with automatic shut-off, film, slide and overhead projectors, small looms, electric hot plates, paper cutter, and basic hand tools.

A variety of materials such as books, periodicals, color prints, slides, circulating and permanent exhibits or original art works by students and professional artists should be available.

The general art room in the middle school should contain the following furniture, tools, supplies, and instructional aids.

Work areas for ceramics, metal work, printmaking, sculpture, and two-dimensional art activities.

Conference area, including art office.

Reference area, with books, periodicals, reproductions, slides, films, and tapes.

Basic tools and supplies for sculpture, including chisels, files, rasps, welding and soldering equipment, mallets, plaster, wood, wires, metals, vermiculites, clay, and firebrick.

Basic tools and supplies for drawing and painting, including brushes, painting knives, drawing and painting surfaces; tempera, acrylic, oil and water color paints; inks, markers, crayons, pens, and pencils.

Basic tools and supplies for printmaking, including press, metal plates, wood and linoleum blocks, chisels, cutters, silk screen equipment, inks, and brayers.

Basic tools and supplies for textile designs, including table and floor looms, hooking frames, needles, yarns, fibers, fabrics, and natural materials.

Basic tools and supplies for ceramics, including kilns, modeling tools, turntables, potter's wheel, clays, glaze ingredients, portable clay storage bins, and damp boxes.

Basic tools and supplies for photography, including darkroom, special sinks, camera, film, enlargers, print boxes, tanks, trays, dryers, and mounting devices; access to projection screens, carousel, and 16 mm and filmstrip projectors.

MUSIC EDUCATION

The role of music in the middle school is more than an extension and expansion of elementary music. It serves as a bridge in the progression of a sequential in-depth program from kindergarten through the twelfth grade.

The purpose of music in the middle school is two-fold..

1. To provide all students with successful experiences which encourage continued musical understanding.
2. To provide musical performing organizations which satisfy the artistic needs of interested and gifted students.

Objectives

The music curriculum must deal with the development of conceptual understandings, personal attitudes, techniques, skills and aesthetic sensitivity. Objectives might include the following:

1. To develop the ability to identify many types and styles of music through guided listening, singing, and performing.
2. To study music through listening, singing, playing instruments, creating, moving to music or a combination of these.
3. To identify and respond to music notation and terminology.
4. To provide in-depth sequential music experiences for each student according to his ability, interests, maturity level, and physical development.
5. To illuminate the nature of music as an art, through participation and performance, with emphasis on the development of skills, understandings and attitutdes.
6. To guide students into relating music to other subject areas.
7. To enable students to know the musical resources of their community.
8. To appreciate the skill of other performers with various instruments and forms of musical art.

Course Content

The need to provide all students with the opportunity for maximum musical growth justifies a curriculum that includes opportunities for all students to participate in music experiences.

Music Laboratory

A basic music class should be required for all students during the first year of middle school. A student who desires to take other music courses should be allowed to substitute a music elective. The music laboratory class should promote enough interest so that students will seek further experiences with music and gain the knowledge necessary to make those experiences meaningful.

Student discovery and personal participation are emphasized as leading to the most effective learning. Music laboratory experiences

should provide for the development of comprehensive musicianship through the following.

1. Knowledge of music literature
   a. Styles, periods, and types of music by listening and performing
   b. Functions of music: drama, dance, worship, etc.
   c. Relationship to other curriculum areas
2. Singing
   a. Unison, two, and three part
   b. Popular, folk, jazz, ethnic, and art songs
   c. Further development of music reading through singing
   d. Large and small ensemble experience
   e. Opportunity to perform individually
3. Rhythm
   a. Composing, conducting and interpreting rhythms
   b. Improvising
   c. Directing folk and square dances
   d. Playing rhythmic accompaniments to familiar songs, using folk and standard rhythmic instruments
   e. Dictation and notation
4. Playing
   a. Rhythm instruments and simple melody instruments such as the marimba, song bells, recorder, social instruments, and autoharps
   b. Class instruction in piano or guitar
   c. Large and small ensemble experience
   d. Opportunity to perform individually
5. Reading Music
   a. Study of rock, and jazz, as well as Renaissance, baroque, classical, romantic and contemporary periods of Western civilization
   b. Sightsinging
   c. Rhythmic patterns
   d. Musical symbols
6. Listening
   a. Distinguishing simple elements in music such as mood, rhythm, instruments, themes, forms

b. Opportunity for informal, unstructured listening
c. Individual or group experiences

7. Creative
   a. Continuing opportunities for original responses in rhythms, songs, playing, listening
   b. Encouraging the composition of original rhythms, melodies, accompaniments to songs, simple harmonizations to familiar songs
   c. Dramatizing songs
   d. Encouraging contemporary composition using graphic notation and electronic devices

Modern sounds, including, rock, pop, jazz and ethnic music, are utilized today to enhance student involvement and participation in music classes. As the students begin to understand the basic form and structure of familiar music, they are more eager to examine the structure, form and style of music accepted as "great music" of the past.

Teachers are encouraged to introduce many aspects of music exploration into the music laboratory class to provide insight into the wide range of possibilities for further study.

At the completion of the music laboratory class, students should have opportunities for pursuing special interests.

Band

Students should be given an opportunity to elect instrumental music study at any time during the middle school year. The band program should include both beginning and advanced wind and percussion groups.

It is important that students be grouped according to their musical progress, rather than by strict adherence to grade level. Instruction in band should involve ensembles, small groups, and large groups. Experiences should focus on mastery of concepts involved in the total art of music rather than on mere mastery of performance skills.

Further information on the music program is provided in the State Department of Education publication, *Music in the Middle School,*

available on request from the State Department of Education, 810 Rutledge Building, Columbia, S. C. 29201.

Equipment and Materials

Local music educators should be involved in planning for purchases so that those items most critical to the music program may be given priority. Annual budget allotments are essential for maintaining and expanding the music program.

EXPLORATORY PROGRAMS

The middle school curriculum should include opportunities for the students to amplify interests, develop new ones and probe the wide range of ideas and activities that fall outside of the usual academic program. Although some middle schools may offer specialty courses such as those described in this section, other methods of providing exploratory experiences are equally appropriate and may be less restricting in terms of topics, equipment and facilities.

By identifying the resources of the faculty members (skills, hobbies, interests) and the community, a list of potential topics for exploratory learning can be developed and matched with student interests. Included may be news media production or analysis, poetry writing, specific sports and crafts, performing and creative arts, child care, interpersonal relationships, motor bike repair, making terrariums, career awareness, ecology, community service—the list is limitless. They could be presented as mini-courses, activity periods or clubs and scheduled on a daily or weekly basis for one to nine weeks. Or they could be incorporated into units of study, particularly in a school organized for team teaching.

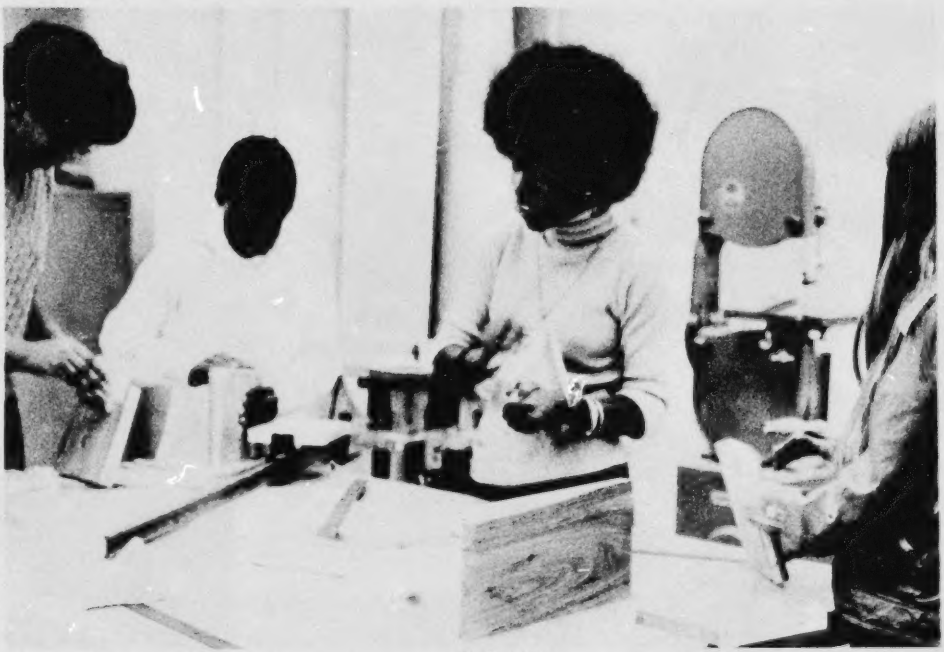
Whether provided as specific courses or as a variety of enriching experiences, the exploratory program is a vital curriculum component that contributes to the achivement of the goals of the middle school.

INDUSTRIAL ARTS

Industrial arts in the middle school serves a two-fold mission: it introduces students to the world of industry and technology, and it guides them in discovering occupational or avocational interests and abilities. It has a responsibility to all students—the future engineer, tradesman, laborer, doctor, artist or householder. As an essential part of basic education of both boys and girls, it provides practical experiences in the use of many tools, materials, processes and products of manufacturing as well as those of the skilled trades and crafts and home life.

Well-organized shop and laboratory experiences assist these youth to understand the world about them. It develops their interests, abilities, and opportunities to make satisfactory adjustments as producers and consumers of individual products and services. It also helps prepare these students to make more realistic fundamental occupational choices during their high school years.

The industrial arts program, a study and interpretation of industry, must be broad based, providing opportunities for experiences



in many areas of technology. Although it is not possible to include all types of industry in the schools, activities are selected from representative industries employing or servicing large numbers of people.

Traditionally, industrial arts has been a program primarily of tool manipulation by boys in a shop. The changing nature of industrial-technical society and women's expanded job market require a broadening emphasis on such areas as electronics, plastics, power mechanics and graphic communications. Courses should be planned to satisfy the needs of both girls and boys preparing to secure a higher education, enter vocational or technical education, or continue in general education.

Goals

1. To develop an interest in, and an understanding of, all aspects of industry and the trades or crafts.
2. To explore industry in terms of its organization, raw materials, processes, products, and occupations.
3. To provide for the development of skill in the use of tools, machines, materials, and processes of industry.
4. To develop an appreciation of good craftsmanship and design, both in the products of modern industry and the artifacts from material cultures of the past.
5. To prepare students for more self-sufficient home living by enabling them to make furnishings and repairs.
6. To provide for integration of man's industrial knowledge and accomplishments in relationship to the school curriculum.

Objectives

The student will

1. be able to identify occupations and organizational systems.
2. be provided the opportunity to select, work with, and compare a wide variety of materials, and to develop consumer knowledge.
3. develop skills commensurate with his abilities in working with hand and machine tools.

4. participate in planned activities and experiences which include manufacturing and construction of projects which are appropriate in meeting his needs.

Course Content

Industrial arts has many factors in common with other subject fields, such as content, principles, academic skills, knowledges and attitudes. *Guide for Industrial Arts*, available from the State Department of Education, Rutledge Building, Columbia, S. C. 29201, explains these relationships.

It is recommended that pupils in grades 5 and 6 not be scheduled in a separate industrial arts class. Instead, it should be integrated into other courses, such as mathematics, where students doing extensive measuring develop accuracy and concepts of tolerance, size, and quantity integral to many processes and jobs.

For grades 7 and 8, exploratory programs should be designed around broad industrial content and be available to both boys and girls. Some schools have moved to include broad-structured programs, such as "The World of Construction," to provide a broad study of industrial applications of knowledge to practice.

The industrial arts instructional program should be organized to provide exploratory study of how:

1. industries are formed and managed to satisfy man's needs.
2. industries change a variety of materials in form and structure thus adding value through processes.
3. industries deal with people in terms of traditional titles (drawing, woodworking, metalworking, electricity, graphic arts, plastics, and ceramics).

The program should include a minimum of four areas of instruction with content presenting not only production practices associated with making things, but also management tasks and personnel inducements needed for production. Laboratory manipulative activities should not be predicated merely on developing skill in tool use, but rather to give students experience in the practical application of knowledge.

Activities to be considered for the development of industrial arts course content built around the traditional areas of instruction include the following.

Drawing

pictorial sketching, making data tables, charts, and graphs; graphic paper layout of equipment, rooms and buildings; preparation of graphic materials for reproduction.

Woodworking

experimenting with a variety of woodworking hand tools and portable or stationary power equipment; comparing the shaping, forming, combining, and assembling processes associated with wood products.

Metalworking

experimenting with a variety of metalworking hand tools and portable and stationary power equipment; performing the shaping, forming, combining, and assembling processes associated with metal products.

Electricity

exploratory designing, assembling and altering electrical components or systems, and applying scientific knowledge relative to electrical product or system development.

Graphic Arts

developing and producing image transfer devices such as block, screen, or printing; photography, the processes relative to collecting, assembling and distributing and utilization of graphic components or products.

Plastics

experimenting with a variety of plastic materials and hand and power tools used to change the materials into finished parts or products by means of casting, injecting, laminating, heating, bending, extruding, and coating.

Ceramics

exploring the industrial process related to designing, forming and finishing ceramic products; making design models;

exploring forming practices related to current industrial usage (space medicine, construction, electronic, and other manufacturers).

For many students, industrial arts in the middle school will be the only experience they will have in this field. The program must include developing attitudes, interests, abilities, skills, problem solving and other attributes needed to function effectively in the world of work. For others, it sets the stage for additional work in the industrial, vocational or technical programs.

Equipment

In planning the industrial arts education laboratory for a particular school, many factors should be considered. These include the grade levels to be served, the scope, sequence, and exploration opportunities of the curriculum, potential school enrollment and the anticipated enrollment in industrial arts education. These factors determine the type and number of laboratories needed, as well as the size, types and quantity of equipment needed for each laboratory.

A list of up-to-date tools and equipment for each type of laboratory and a *Guide for Industrial Arts* are available from the Program Planning Section, Office of Vocational Education, State Department of Education, Rutledge Building, Columbia, S. C. 29201.

CONSUMER AND HOMEMAKING EDUCATION

The middle school consumer and homemaking education program is designed for both boys and girls, since skills necessary for managing finances, family life and home are vital to both males and females. Although designed for grades seven and eight as a one-year or two-semester course, it contains many units which may be introduced through exploratory "mini-courses," or abbreviated units, in grades five and six, such as friends, family life and physical-emotional-social changes.

Major areas of emphasis are personal relationships, personal environment, personal development, and personal health, but units are interchangeable to suit the needs of individual middle school students.

Objectives

Prime objectives of Home Arts instruction are to enable middle school students:

1. To gain new insights into human behavior.
2. To facilitate self-understanding and self-respect as well as personal relationships with others through increased knowledge of human growth and development.
3. To discover and develop interests and abilities in homemaking and consumer roles.
4. To function more effectively as a member of the family, a member of the peer group, a consumer, a manager of resources, and a producer of goods and services.
5. To cope with increasing personal concerns and pressures from peers and adults.
6. To organize and expand existing perceptions relevant to individual and family life.
7. To gain experience in decision-making regarding clothing, food, health, safety, child care, grooming, nutrition, future goals, dating and other elements of their environment.
8. To stimulate continued study and independent exploration of consumer and homemaking education, human relationships, health, and other related fields.

Course Content

I. Suggested length of units for study in the middle school
   A. Four weeks of child care
   B. Three weeks of interpersonal relationships
      1. The home
      2. A project
   C. Two weeks
      1. Friends
      2. Family life
      3. Clothes
      4. Physical, social and emotional change
      5. Future expectations
      6. Nutrition
      7. Sexuality and reproduction
      8. Threats and danger
   D. One week of self-expression
      1. Dress
      2. Accessories
      3. Housekeeping
      4. Food preparation
      5. Food service

II. Personal relationships
   A. Friends
      1. Exploring the need of friends
      2. Becoming a friend
      3. Evaluating assets and liabilities
      4. Maintaining friendships
      5. Cooperating in a partnership
      6. Cooperating in a group
      7. Interacting with older and younger people
   B. Family life
      1. Exploring roles and responsibilities
      2. Facing crises
      3. Relating to family members
      4. Managing resources
         a. Time
         b. Money
      5. Examining life styles

C. Interpersonal relationships
    1. Understanding self concepts
    2. Conforming and nonconforming
    3. Looking at dating
    4. Choosing a conduct code
    5. Building skills
        a. Social behavior
        b. Communications skills
            (1) Verbal
            (2) Non-verbal

III. Personal Environment
A. Clothes
    1. Buying
    2. Caring for
        a. Laundering
        b. Ironing
        c. Removing spots and stains
        d. Repairing
        e. Storing
B. Self-expression through dress
    1. Selecting
        a. Color, design, line
        b. Ready-made clothing
        c. Handmade clothing
    2. Understanding clothing effects on behavior
C. Making a project
    1. Deciding on a fabric
    2. Using a pattern
    3. Using sewing equipment
    4. Constructing a simple project
D. The home
    1. Exploring space
        a. Importance
        b. Influence of color, light and proportion
    2. Examining activities
    3. Assessing needs
        a. Personal
        b. Family
    4. Exploring housing solutions
    5. Taking safety measures

E. Storage and accessories
   1. Storing belongings
   2. Improvising storage aids
      a. Personalization
      b. Construction
F. Housekeeping
   1. Assisting with tasks
      a. Daily
      b. Weekly
      c. Seasonal
   2. Cleaning

IV. Personal development
A. Changes
   1. Growing
      a. Physical
      b. Emotional
      c. Social
   2. Interrelating
   3. Coping
      a. Fears and concerns
      b. Problems
         (1) Personal
         (2) Social
B. Grooming
   1. Developing good habits
      a. Body
      b. Clothing
   2. Using and selecting cosmetics
C. Child care
   1. Enjoying children
   2. Understanding children
   3. Exploring baby-sitting experiences
      a. Qualifications
      b. Sources of work
      c. Responsibilities
      d. Emergencies
      e. Safety
   4. Understanding child's play
   5. Guiding and disciplining

D. Future expectations
    1. Evaluating self
        a. Assets
        b. Liabilities
    2. Establishing goals
        a. Immediate
        b. Long-range
    3. Exploring preparation
        a. Education
        b. Work
    4. Examining adulthood
        a. Roles
        b. Life styles

V. Personal health
A. Nutrition
    1. Making wise food choices
    2. Recognizing the differences between food fads and fallacies
    3. Understanding benefits of good food habits
    4. Improving eating habits
B. Food preparation
    1. Planning simple foods
    2. Understanding techniques
        a. Use of equipment
        b. Safety
        c. Cleanliness
        d. Recipes
        e. Plans for work
C. Food service
    1. Assessing manners
    2. Setting the table
D. Sexuality and reproduction
    1. Understanding reproduction
        a. Male
        b. Female
    2. Understanding fertilization and heredity
    3. Understanding married love
    4. Understanding pregnancy and childbirth
E. Threats and dangers
    1. Handling emergency health crises

2. Caring for personal health
   a. Emotional
   b. Physical
3. Investigating potential threats
   a. Drugs
   b. Alcohol
   c. Cigarettes
   d. Venereal Disease

Materials and Equipment

It is suggested that reference be made to the *South Carolina Consumer and Homemaking Education Curriculum Guide for the Middle School* for behavioral objectives, learning and evaluation experiences, and teaching resources, including books, films, filmstrips, slides and other learning materials. The guide is available from Home Economics Education, South Carolina Department of Education, 900 Rutledge Building, 1429 Senate Street, Columbia, S. C. 29201, or from home economics consultants in vocational education district offices.

FOREIGN LANGUAGE

In South Carolina, the foreign-born percentage of population has been below 1% for decades. Today the state is experiencing increased migration of exchange students and teachers, business, industrial and government employees, Cuban refugees, military personnel, Spanish-speaking migratory farm workers, and other nationals of varied foreign countries.

It has been predicted that South Carolina will become a major distribution center linking South and Central America with the U.S. The Port of Charleston is expanding its shipping of both freight and passengers, while airlines continue to transport more people and goods to and from other lands. South Carolina is also now fourth in states attracting foreign investors.

Likewise, growing numbers of South Carolinians take advantage of improved economic conditions and greater leisure to travel, not only to Mexico, Canada, the Caribbean Islands and South and Central America, but also to Europe, Africa, the Pacific Islands, the Far East, Near East, and Australia. Touring, studying abroad and doing business with foreign firms is within the grasp of a broad cross-section of people. Many South Carolina colleges and a few high schools now have regularly-scheduled study courses in other countries. In this context, knowledge of a foreign language is one of the best tools for goodwill.

Even more important, learning language is of itself a valid learning experience, because it teaches that behind apparent or outward differences—specifically a different language and different set of customs—there are not stereotypes but people who share pancultural similarities and a human bond with us. The study of foreign language thus contributes to the intellectual, social, aesthetic and emotional growth of students. It serves to expand students' personal cultural awareness and keep them abreast of modern writings, research and information.

To listen to, to understand, to speak and to read a foreign language provide avenues through which Americans not only can increase their understanding of what is happening abroad, but can also increase their understanding of our country and its people. As the educational offerings are enriched with foreign language and cultures, stereotyped opinions about other peoples are minimized, foreign-held stereotypes concerning us are broken down, and the seeds of lasting international understanding are planted.

Objectives

1. To enable students to speak and comprehend a foreign language on those subjects within the range of their experiences.
2. To read and write at appropriate levels without recourse to English translations and to acquire some understanding and appreciation of the heritage of the people whose language is being studied.
3. To cultivate interest in the phenomenon of language itself and in the relationships and etymology of foreign languages and English, creating a broader understanding of our own language.
4. To gain understanding and respect for the culture and customs of peoples of other nations by learning significant geographic, cultural, economic, and political features of another country, its contemporary values and the behavior patterns of its people, which in turn should give students a fresh perspective on their own value patterns and cultural behavior.
5. To encourage students to communicate in the language of peoples from other nations in today's multilingual, Telestar, jet-age world when foreign-language speaking industrialists, businessmen, government employees and other people are increasingly coming to South Carolina to work, live, visit and study.
6. To improve abilities in English as a frequent by-product of foreign language study.
7. To enhance self-concepts by acquiring skill in communication in a foreign language.
8. To reinforce social studies, mathematics, English, language arts and other study areas.

Course Content

For students in a first exploratory course at the middle school level, conversational modern foreign languages without emphasis on grammar is recommended. Choice of language and course content

depends largely on the teacher's background and the students' interests and needs. The more different languages pupils may explore, the more varied will be their experience and knowledge on which to base further study, either in school or independently.

Beyond the exploratory phase, it is important that the course be coordinated with foreign language in the district high school and elementary schools. The choice of texts and materials should be appropriate to the age level and in complete agreement and articulation with the overall district program. A lack of articulation will cause either confusion for the students as they move from one school to the higher level, or frustration as they find their higher level course either too difficult or too simple with respect to their earlier training. As a result, the programs at all levels will suffer.

Because of the variables among teachers, students and school curriculum and equipment, specific materials and methods are not recommended here. However, the foreign language program should have certain minimum elements appropriate to this age group.

Basic Language Learning Tools for an Audio-Lingual Approach

1. Correlated audio-lingual materials with some audio materials by native speakers
2. Directed dialogues, with useful phrases and practice drills for flexibility of expression
3. Simple skits or dramatizations for role-playing
4. Simple readings
5. Simple aural comprehension exercises
6. Simple directed conversation activities

An Organized Program of Culturally-Oriented Opportunities

1. Team teaching and/or cooperative planning to coordinate the foreign language instruction with music, art, history, geography, mathematics, literature, family living and other subjects (e.g., if suitable, 7th grade Old World studies with French)

2. Songs and music, travel posters and folders, contemporary magazines and other printed material appropriate to this age group
3. Group and individual projects appropriate for this level on current topics of the contemporary society of the people whose language is being studied
4. Field trips (art museums, concerts, films, plays, restaurants, foreign industries or business, etc.)
5. Use of resource persons, such as natives of the country or local residents who have visited extensively in the country being studied, to discuss the culture, answer questions, show slides or movies
6. Identification of the foreign cultural influence or historical traces in South Carolina
7. Books, films and other learning materials on the art, architecture, literature, history, economy, geography, government, education and any other aspects of life in the country being studied, appropriate to student interests and abilities

Behavioral Objectives

Teachers of foreign language in the elementary, middle and high schools of a district should cooperatively plan student behavioral objectives which will assure continuous progress in foreign language development. While such objectives must be realistic and flexible for adaptation to the individual teachers and students, some examples are suggested below.

1. Demonstrate ability to understand the language, orally and written, at this level by responding to questions or cues; by selecting proper answers on multiple-choice or true-false tests over material studied; by demonstrating ability to comprehend basic pattern flexibility changes.
2. Demonstrate ability to speak and write the language by asking and answering questions; using courtesy phrases for everyday situations, participating in dialogue and dramatizations; making simple changes in given patterns;

giving simple descriptions of material presented; writing simple dictation.

3. Use for the above proper changes in number, gender, word order and basic verb tenses.
4. Identify some predominant cultural features of the country whose language is being studied.
5. Demonstrate ability to distinguish differences, similarities and interrelationships of cultural features and, at an appropriate level, draw some comparisons between the United States and the country whose language is being studied.
6. Observe similarities and differences of words in English and the foreign language.

Materials and Equipment

While specific materials are based on local decisions, the following equipment and materials should be considered minimal:

1. Correlated audio-lingual and printed materials
2. Films, filmstrips, color slides, with appropriate projectors
3. Adequate projection screen and blinds to darken classroom
4. Tape recorder (at least one per classroom) and appropriate tapes
5. Record-player and records

Facilities

1. Classroom of adequate size with flexible furnishings (e.g., chairs that can be drawn into circles) to accommodate large or small group learning and individual work
2. Display areas for student work, posters, maps, stamp collections, coin collections, and other realia
3. Shelving for appropriate books and magazines on various aspects of life in the foreign country for convenient student access

PERSONAL TYPING

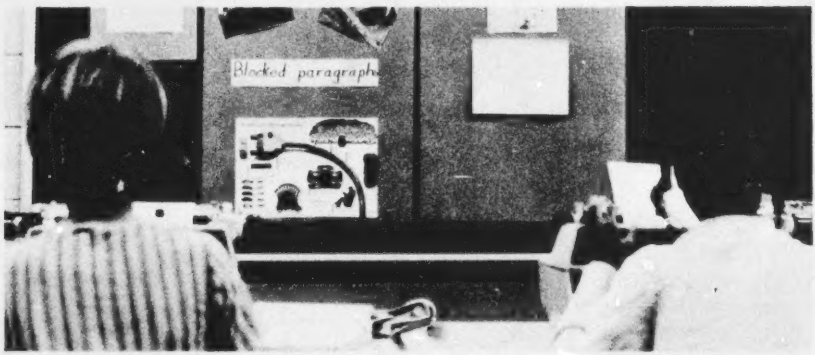
A typing program in the middle school is designed to develop typing skills for personal rather than vocational use. Through it, students learn to type business and personal letters, reports, school assignments, statistical data and so forth. Included are such specific skills as touch-typing, margin setting, paragraphing, spacing, tablulating, dividing words, centering and format arrangement for letters, reports, footnotes and tables.

Instead of total group instruction, many programs are becoming individualized through the use of centers and learning-activity-packages (LAP's). After the student learns the keyboard, he/she moves through a series of centers or LAP's that include objectives and activities designed to teach specific skills. Students learn at their own pace, assist each other at times and call on the teacher as needed. The teacher plans the program, assesses progress and works with individuals and small groups on specific learning tasks.

If reading problems hamper progress, cassette tapes can be prepared to guide students through the centers or LAP's. The teacher-made tapes provide practical instructions on how to proceed, help students focus on specific tasks and can provide immediate feedback.

Students report that typing skills enrich their personal lives and have a positive effect on their academic achievement as well. Typing instruction improves sentence and paragraph structure and spelling. In addition, typed school assignments and reports are often better organized and more readable.

Personal typing may be offered as a mini-course, for a semester or full year.



LIBRARY/MEDIA CENTER

The library/media center is an essential part of the middle school program. It functions to support curriculum objectives. Therefore, its major purpose is to provide services to meet the needs of individual students and teachers in the school.

The librarian, who is also a certified teacher, should understand students, know materials, and bring the two together.

The librarian should discuss the media center program with the principal and plan the program cooperatively with the teachers.

The program should include instruction in library/media skills which will enable each student to become a self-reliant user of

materials. Skills to be taught or reviewed include operation of audiovisual equipment, arrangement of materials in the center, the Dewey Decimal classification system, card catalog, reference books and reference skills, guides to periodical literature and literary appreciation. These skills are taught as a result of classroom needs.

A wealth of materials—printed and nonprinted—should be provided to meet the wide range of needs and interests of the children. The selection of materials should be a joint responsibility of the librarian, teachers, and the students. It is important that the librarian be a member of the curriculum planning teams of the school.

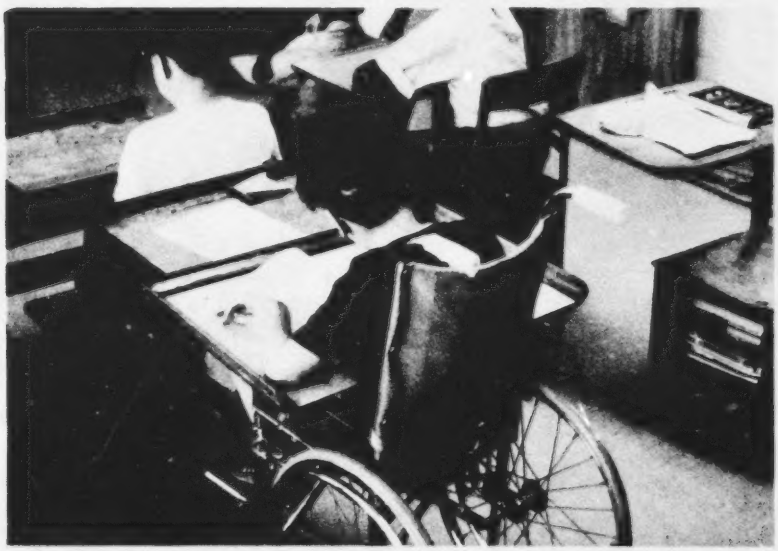
Audiovisual equipment is provided in the center for effective use by students and teachers. Carrels are also included for individual listening and viewing.

The library/media center should use flexible scheduling to insure free and independent use of materials by individuals, small groups of students, and teachers. The librarian should be free to work with all students. It should no longer be necessary to schedule students into the media center on a regular basis. Instead, an active instructional program will stimulate increased library usage. When an entire class uses the center, the teacher, the librarian, and the students work as a team.

Students should be encouraged to serve as assistants in the library/media center. They render invaluable services to other students, as well as receiving personal benefits from this exposure to materials and their service to others.

The appearance of the library/media center in the middle school is important. It should be comfortable, attractive and inviting. Students should have an opportunity to display their work in the center.

Evaluation is important for continuous improvement in the program; therefore, the principal, the teachers and the students should be considered in any evaluation of the library/media program.



PROGRAMS FOR THE HANDICAPPED

Curriculum designs relative to the various handicapping conditions include:

Educable and Trainable Mentally Handicapped

Individualized educational plans, K-12, available from the Department of Education, represent sequential behaviors and are criterion referenced. A unique feature is that materials and methodologies are suggested for each behavior specified.

Visually Handicapped

Visually handicapped children should follow the general curriculum. Large print or braille materials are provided under a cooperative agreement between the Department of Education, the Commission for the Blind and the American Printing House for the Blind.

Hearing Handicapped

The curriculum followed is that of the "normal" child with special teaching techniques, methodologies and equipment, such as hearing aids, and auditory training units.

Speech Correction

Speech correction follows no particular curriculum design. Children's individual speech problems are ameliorated through individualized therapy.

Learning Disabilities

Because children with learning disabilities do not manifest cognitive handicaps, they must be taught via a modality basis; for example, reversals which are not products of the eye mechanism must be remediated. In general, the regular curriculum is pursued.

Emotionally Handicapped

Emotionally handicapped children follow the general curriculum. Special programs for emotionally handicapped children are geared toward coping strategies, heightened frustration tolerances, etc.

Orthopedically Handicapped

Orthopedically handicapped children, by definition, cannot follow one general curriculum except in those rare instances in which the learning modalities and cognitive processes are intact. Orthopedically handicapped children manifest such diverse problems that individually prescribed instruction must be followed.

Deaf-Blind

Children who are both deaf and blind are generally taught in residential institutions. The emphasis is on helping the children to reduce their dependency on others.

Additional information regarding methodology and instruction design/program model may be obtained from the Office of Programs for the Handicapped, 309 Rutledge Building, Columbia, South Carolina 29201.

BIBLIOGRAPHY

Alexander et. al. *The Emergent Middle School*. New York: Holt, Rinehart and Winston, Inc., 1969.

Alexander, William M. "A Survey of Organizational Patterns of Reorganized Middle Schools," USOE Cooperative Research Project 7-D-026, 1968.

Alexander, William M. "New Organizational Patterns for the Middle School Years." *The New Elementary School* (Alexander Frazier, ed.), ASCD, 1968.

Association for Childhood Education International. *The Transitional Years: Middle School Portfolio*. Washington, D. C.: ACEI, 1968.

Baughman, M. Dale, ed. *Block-Of-Time Scheduling Practices in Junior High Schools.* Danville, Illinois: Interstate, 1960.

Bondi, Joseph. *Developing Middle Schools: A Guidebook*. New York: MSS Information Corporation, 1972.

Bossing and Cramer. *The Junior High School*. Albany, New York: Faculty-Student Association of the State University of New York, 1968.

Brown, Elmer E. *Making of Our Middle Schools*. Totowa, New Jersey: Littlefield, Adams and Company, 1970.

Curtis, Thomas E., ed. *The Middle School*. Albany, New York: Faculty-Student Association of the State University of New York, 1968.

DeVita, Joseph, Philip Pumerantz, and Leighton Wilklow. *The Effective Middle School*. Englewood Cliffs, New Jersey: Prentice- Hall, 1970.

Eichhorn, Donald H. *The Middle School*. New York: Center for Applied Research in Education, Inc., 1966.

Edwards, Reese. *The Middle School Experiment.* Boston, Massachusetts: Routledge and Kegan, 1972.

Faunce and Clute. *Teaching and Learning in the Junior High School.* Belmont, California: Wadsworth Publishing Co., Inc., 1961.

Franklin, Marian P., ed. *Classroom Centers and Stations in America and Britain.* New York: MSS Information Corp., 1973.

Grooms, M. Ann. *Perspectives on the Middle School.* Columbus, Ohio: Charles E. Merrill, Inc., 1967.

Gruhn and Douglass. *The Modern Junior High School.* New York: The Ronald Press Co., 1970.

Hansen, John and Arthur C. Hearn. *The Middle School Program.* Chicago: Rand McNally and Co., 1971.

Hertling, James E. and Howard G. Getz. *Education for the Middle School Years: Readings.* Glenview, Ill.: Scott Foresman and Co., 1971.

Howard, Alvin W. *Teaching in Middle Schools.* Scranton, Pennsylvania: Intext Educational Publishers, 1968.

Howard, Alvin W. and George C. Stoumbis. *Junior High School and Middle School: Issues and Practices.* Scranton, Pennsylvania: Intext Educational Publishers, 1970.

Johnson, Busacker, Bowman. *Junior High School Guidance.* New York: Harper and Brothers Publishers, 1961.

Kapfer, Philip G. and Glen F. Ovard. *Preparing and Using Individualized Learning Packages for Continuous Progress, Ungraded Education.* Englewood Cliffs, New Jersey: Educational Technology Publications, Inc., 1970.

Kindred, Leslie W. *The Intermediate Schools.* Englewood Cliffs, New Jersey: Prentice-Hall, 1968.

Koos, L. V. *Junior High School Trends.* New York: Harper and Brothers, Publishers, 1955.

Lurry and Alberty. *Developing a High School Core Program.* New York: Macmillan Company, 1957.

McCarthy, Robert J. *How to Organize and Operate an Ungraded Middle School.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967. (Successful School Administration Series)

McCarthy, Robert J. *Ungraded Middle School.* Englewood Cliffs, New Jersey: Parker Publishing Co., 1972.

Moss, Theodore C. *Middle School.* Boston, Massachusetts: Houghton, Mifflin Co., 1969.

Murphy, Judith. *Middle Schools.* New York: Educational Facilities Laboratories, 1965.

Nickerson, Neal C. *Jr. High Schools Are on the Way Out.* Danville, Illinois: Interstate, 1966.

Noar, Gertrude. *Individualized Instruction: Every Child A Winner.* New York: Wiley, John and Sons, Inc., 1972.

Overly, Donald E., et. al. *Middle School: Humanizing Education For Youth.* Belmont, California: Charles A. Jones Publishing Co., 1972.

Partridge, John. *Middle School.* New York: International Publications Service, New York, 1966.

Petrequin, G. *Individualized Learning Through Modular Flexible Programming.* New York: McGraw-Hill Book Co., 1968.

Popper, Samuel. *The American Middle School.* Columbus, Ohio: Xerox College Publishing Education Center, 1967.

Pumerantz, Philip and Ralph W. Galano. *Establishing Interdisciplinary Programs in the Middle School.* West Nyack, New York: Parker Publishing Co., Inc., 1972.

Romano, Louis G., ed. *Middle School: Selected Readings on an Emerging School Program.* Chicago, Illinois: Nelson-Hall Co., 1973.

Storen, Helen F. *The Disadvantaged Early Adolescent: More Effective Teaching.* McGraw-Hill Book Co., 1968.

Stoumbis, George C. and Alvin W. Howard. *Schools for the Middle Years.* Scranton, Pennsylvania: Intext Educational Publishers, 1969.

Stradley, William E. *Practical Guide to the Middle School.* Englewood Cliffs, New Jersey: Center for Applied Research in Education, Prentice-Hall, 1971.

Swenson, G. and D. Keys. *Providing for Flexibility in Scheduling and Instruction.* Englewood Cliffs, New Jersey: Prentice-Hall, 1966.

Tanner, James M. *Education and Physical Growth.* London: University of London Press, 1961.

Van Til, Vars, and Lounsbury. *Modern Education for the Junior High School Years.* Kansas City: Bobbs-Merrill Co., Inc., 1967.

Vars, Gordon. *Common Learning: Core and Interdisciplinary Team Approaches.* Scranton, Pennsylvania: International Textbook Co., 1969.

_____. *Guidelines for Junior High and Middle School Education—A Summary of Positions.* Washington: National Association of Secondary School Principals, 1966.

Wright, Grace. *Core Curriculum Development Problems and Practices.* Washington: Office of Education Bulletin, 1952, No. 5.

Additional references and materials may be obtained by contacting The Middle School Research & Resource Center, Education Center of the Indianapolis Public Schools, 120 E. Walnut Street, Indianapolis, Indiana 46204.

For a few extras to put into your library, choose from the following periodicals:

1. Abramson, Paul, ed. *School Management.* 22 Putnam Avenue, Greenwich, Connecticut, 06830. $8.00.

2. Cohodes, Aaron, ed. *Nation's Schools.* McGraw-Hill Publishers, Circular Department, 1050 Merchandise Mart, Chicago, Illinois, 60654. $12.00.

3. Fenner, Mildred S., ed. *Today's Education* (Formerly NEA Journal). National Education Association of the United States, 1201 16th Street, N. W., Washington, D. C., 20036. $00.80 per month for membership.

4. Green, Jospeh, ed. *Clearinghouse.* Fairleigh Dickinson University, Teaneck, New Jersey, 07666. $5.00.

5. Jenkins, William A., ed. *Elementary English.* National Council of Teachers of English, 508 South 6th Street, Champaign, Illinois, 61820. $7.00.

6. Leeper, Robert R., ed. *Educational Leadership.* Association for Supervision and Curriculum Development, 1201 16th Street, N. W., Washington, D. C., 20036. $5.00.

7. Neubauer, Dorothy, ed. s National Elementary Principal's Journal. Elementary School Principals Department, National Education Association, 1201 16th Street, N.W., Washington, D. C., 20036. (Membership only)

8. *Theory into Practice.* Ohio State University, College of Education, Arps Hall, 1945 North High Street, Columbus, Ohio, 43210. $3.75.

9. Rehage, Kenneth, ed. *Elementary School Journal.* University of Chicago Press, 5750 South Ellis Avenue, Chicago, Illinois, 60637. $6.00.

10. Seyfert, Warren C., ed. *National Association of Secondary School Principals.* National Association of Secondary School Principals, 1201 16th Street, N.W., Washington, D. C., 20036. $15.00.

Many State Department of Education publications may be helpful in implementing flexible middle school programs, although only a few directly geared to this age group have been published in South Carolina or nationally.

Recent publications now available are:

Music in the Middle School

Consumer and Homemaking Education - Middle School

Science Education K-12

Learning Centers: Children Alive

Good Mental Health in the Classroom

Guide for Teaching Physical Education 1-6

Guide for Teaching Physical Education 7-12

Art

Defined Minimum Program for South Carolina School Districts

Guide for Industrial Arts in South Carolina Schools

The Resource Room: A Practical Approach to Providing Instruction for Mildly Handicapped Children

Building Elementary Reading Programs

A Pocketful of Reading Materials